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## This Issue in Brief

*The increased use of machinery in window-glass making caused the organization of handworkers in this industry recently to pass out of existence.* This union had for years refused to make any concessions to the machines which killed the handicraft, and preferred voluntary dissolution to surrendering its former principles and policies (p. 1).

*Length of service has an important influence on wage rates,* according to a study of this subject based on the experience of a considerable number of employees in certain machine trades. In general, average hourly earnings tend to increase quite markedly as length of service increases. In milling-machine operations in 1925, for instance, the averages for short, moderately long, long, and very long service groups are 57.9 cents, 65.4 cents, 74.3 cents, and 79.7 cents, respectively (p. 17).

*The Association of Governmental Officials in Industry is an organization of the various State officials concerned with the administration of labor laws.* For a number of years, annual conventions have been held. An article in this issue traces the history and development of the association and some of the problems confronting it. One of the major problems arises from the fact that certain States do not authorize their officials to attend the annual meetings (p. 25).

*Accident rates in the iron and steel industry as a whole continued to decline in 1928,* according to the survey just completed by the Bureau of Labor Statistics. However, for the selected group of plants for which the bureau has carried a separate tabulation each year, and which were among the first to give consideration to the accident-prevention movement, it is a matter of surprise that four of the six units forming the group show higher accident-frequency rates in 1928 than in 1927 (p. 32).

*The analysis of the cost of living of Federal employees* is continued in an article (p. 241) dealing with the miscellaneous expenditures of such persons. Detailed analyses of incomes and expenditures, and of food expenditures, appeared in earlier issues.

*Building permits issued in the 85 cities of the United States* having a population of 100,000 or over show an estimated expenditure for new building operations of $1,421,106,688 during the first half of 1929. This is an increase of three-tenths of 1 per cent over the expenditure during the corresponding period of 1928. Of the amount expended during the first half of 1929, 64.1 per cent was for residential buildings and 35.9 for nonresidential buildings. Apartments continue to provide the large majority of new family dwelling places in these cities. During the first half of 1929 apartment houses provided 62.3 per cent of the new family habitations, 1-family dwellings 27.8 per cent, and 2-family dwellings 9.8 per cent (p. 121).

*The results of the survey of earnings and hours in the iron and steel industry,* made in 1929 by the Bureau of Labor Statistics, is summarized in this issue (p. 164) for open-hearth furnaces and for puddling, plate, and blooming mills. Comparing 1929 with 1926, hourly earnings show an increase in all four departments. Full-time hours per week increased in three of the four departments.

*The entrance wage rates of common labor averaged 43.7 cents on July 1, 1929.* This average is based on returns covering 155,328 employees in 13 industries. The term "entrance wage rates of common labor" refers to the rates of pay for unskilled adult male common laborers when first hired (p. 171).

*Some 34 million persons are members of the consumers' cooperative societies of 28 countries, and their stores do an annual business of nearly 5 billion dollars.* So important is the consumers' cooperative movement that in some countries of Europe its membership forms more than one-tenth of the total population. In Russia alone nearly 16 million persons are cooperators, in Great Britain and Ireland nearly 6 million, and in Germany nearly 4 million (p. 99).

*The cooperative societies of Europe are doing an increasing amount of work along recreational lines.* Among their recreational features are included motion pictures, illustrated lectures, dramatic clubs, operation of seaside and mountain vacation homes for members, athletic clubs, vacation trips, excursions, picnics, and concerts and entertainments of various kinds. The societies of Great Britain, Germany, Finland, Switzerland, and Sweden have been especially active in this work (p. 63).

*Child endowment financed entirely from public revenues or by a direct levy on industry is opposed in the majority report of the Australian Royal Commission on Child Endowment or Family Allowances.* The three out of the five commission members who signed that report suggest, however, that a family allowance scheme which would bring about a certain change in the distribution of wages deserves the most earnest and favorable consideration of wage earners and industrial tribunals. The minority report favors a child-endowment system functioning on funds secured through the reduction of the tax-exempt income to £200 ($973.30) for persons without dependents and by grading more steeply the tax rates for incomes at the highest levels (p. 81).

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## The Passing of The National Window Glass Workers

KNIGHTS of Labor, Local Assembly No. 300, composed of all the glass blowers, gatherers, flatteners, and cutters in the United States engaged in the manufacture of window glass, began its career in 1880 with the militant slogan, "Never surrender." For 40 years thereafter Local Assembly No. 300 and the other organizations of window-glass workers which followed and superseded it in hand manufacture maintained the attitude suggested by that motto so successfully that they not only held complete control of the industry economically but to a large extent commercially as well, through agreement and cooperation with the manufacturers.

Window-glass workers were highly skilled craftsmen, holding firmly to the old guild standards of skill and nationalism and to the doctrine of handing the trade on from father to son. By 1900 the organized window-glass workers held a position of power and prestige which remains unique in labor history.

But the craft which "never surrendered" in economic situations went down to defeat in the face of the mechanical progress of the twentieth century, and the organization of hand workers passed out of existence in 1928, still a skilled craft union which for years had refused to make any concessions to the machines which killed the handicraft. The organizations which grew up within the machine glass plants as the result of that attitude on the part of the hand craftsmen now represent organized labor in the window-glass industry.

### Rise of Knights of Labor, Local Assembly No. 300

BEFORE 1880 window-glass workers were organized into scattered local unions, each of the four skilled trades—blowers, gatherers, flatteners, and cutters—having separate organizations. In 1879 the various groups of blowers and gatherers combined as Local Assembly No. 300 of the Knights of Labor. They were joined a few months later by the cutters and in 1880 by the flatteners. From that time the policy of keeping all four branches of the industry in one organization was maintained, not, however, without occasional revolt and secession, principally on the part of the two smaller groups, the flatteners and the cutters.

Processes in the hand manufacture of window glass have been minutely described in Bulletin No. 441 of the Bureau of Labor Statistics (Productivity of labor in the glass industry, pp. 145–148).

A glass manufacturer, testifying at a hearing before the United States Tariff Commission in 1918, pictured the processes in more colloquial terms:

> The gatherer simply puts his pipe into the tank and gathers the lump (of molten glass). To do that he has to go to the tank about four times on the average and when he gets the lump gathered sufficiently to make a cylinder then the snapper carries it to the blower; the blower works it on an iron block first, to get it shaped up on the neck of his pipe, and then he takes it back to the tank furnace, reheats it and blows and swings out the cylinder in the swing hole alongside of the tank until he gets it formed in the shape of a cylinder. Then the snapper cracks it open and removes it from the swing hole, squares each end, and splits it on one side, making a roll, like a sheet of music, for instance. After that it is carried to the flattening house, placed on a large clay block called the flattening stone which is perfectly smooth. It is reheated there to a degree that can be flattened out. Then it is put in the lehr, where it cools for about an hour, which is the tempering process to toughen the material, and from there it goes to the cutting room to be cut into the various sizes.

The snapper has never been recognized by the four skilled trades as a skilled worker, although, as the manufacturer quoted pointed out, "there is a good deal of skill in his part of the work too." Repeatedly, throughout the history of the 4-trade organization, efforts to incorporate the snappers into the union, for the economic advantage of both groups, were defeated by the unshakable attitude of craft caste.

Beginning in 1881 "the glass workers won every strike undertaken, and their wages rose progressively from year to year" until they became "the highest paid of all wage earners," to quote a pamphlet on organization history issued recently.

In addition to uniform wage rates, working rules were imposed which established working conditions and standards in all plants. Beginning about 1885, the organized workers controlled not only wages and working conditions but production as well. The report of the United States Commissioner of Labor on regulation and restriction of output (Eleventh Special Report, 1904) says in relation to the window-glass industry that—

> It is the only industry where the workmen, through their organization, have attempted to join with the employers to regulate the total output of the industry according to the varying states of the market. By reason of thus entering the province of the manufacturer the history of the restrictions on output in this industry is a history of the alliances of various associations of employers with associations of workmen. More than this, the associated jobbers and wholesale dealers have become parties to the agreements. * * *
>
> It is firmly believed by all parties in the trade that the peculiar nature and situation of the industry made regulation and restriction of output necessary. They point out, in the first place, that the market for window glass is wholly inexpansive and inelastic. That is, consumers can not be induced by even the most extreme concessions in prices to take a larger stock than they will take when prices are held up. This is because the market is almost wholly that furnished by the building trades, and the amount of window glass that will be purchased depends on the amount of building construction that is going on. The cost of the window glass for a building can scarcely exceed 1 per cent or 2 per cent of the total cost of the building, and an extreme change in the price of so small an item has no appreciable effect on the amount of construction. * * * The building industry itself is largely speculative, and therefore subject to extreme fluctuations. * * * Altogether the consequence is that while the factories are working, the output is beyond the current demands and the stock is piling up. * * * Price cutting at such times becomes utterly reckless, and frequently the weaker producer goes to the wall. Frequent repetition of these experiences has firmly convinced the trade, all the way from workman to jobber, that restriction, or what they call regulation, of output, is necessary for the protection of all. In

general this regulation has been brought about in three ways, namely, by limiting the maximum output per week of each blower, by limiting the number of blowers, so that there are not enough to operate all of the pots and pot capacity, and by alliances of the unions with leading manufacturers to force a shut-down of the independent manufacturers when stocks accumulate. (Pp. 599, 600.)

The history of Local Assembly No. 300, up to 1900, then, is chiefly that of a strong organization of highly skilled workers successfully establishing itself in a position of economic power. The nature of the industry, and more particularly of the work, with its requirement of a high degree of skill and a long apprenticeship, made organized control not only possible but advisable, and profitable not only to the workers but to the manufacturers. The number of glassworkers was always limited, and they were all union men, and only by accepting the trade agreements of the union and working in harmony with it could a manufacturer be assured of keeping his plant manned.

The only mechanical change which had taken place in the industry up to 1900 was the introduction of the continuous tank in place of the clay pots for melting. Natural gas came into use about the same time, and proved to be the ideal fuel for the operation of glass furnaces. Natural gas and the continuous tank together gave an immense impetus to the industry, simplifying production and expanding the business materially.

The continuous-tank furnace, with its greatly increased capacity, soon superseded the pot furnace. As an old-line manufacturer saw it, "the evolution of cleaning up the pot furnace and bringing tank furnaces into general use caused most of the overproduction in the industry." A more significant result of the advantages derived from the uninterrupted working of the glass made possible by the continuous melting tanks was that of making the industry "ripe for the introduction of machinery." (Bul. No. 441, p. 4.)

## Disruption of Local Assembly No. 300

EXPANSION of the industry and an increase in the number of plants in 1899–1900 resulted in a scarcity of workers. To insure the most advantageous position in getting workmen, the American Window Glass Co., a corporation which had been formed by several individual manufacturers prominent in the industry, made a contract with Local Assembly No. 300. Under the terms of this contract—

A block of stock whose par value was $500,000 was placed in trust for the union, to be paid for out of accruing dividends, and the union was to have representation on the board of directors of the corporation. The whole transaction was conditioned upon Local Assembly 300 furnishing this corporation an adequate number of skilled men to run its plants to full capacity during the "length of fire" agreed upon each year. The assembly accepted the stock and elected its president, Mr. Simon Burns, as its representative on the board of directors. The attempt to carry out this arrangement disrupted the union and caused the formation of another organization, which at first contested for the right to the title Local Assembly 300, Knights of Labor, but being defeated in this contention, took the name of "Window Glass Workers' Association of America." This organization immediately advocated longer fires and a fair show for the independent manufacturers. Had it not been for this split in local assembly the independents would have been deprived of a large proportion of their workmen. As it was, their plants were manned by the new organization, and, at a later date, Local Assembly No. 300 being unable to fulfill its part of the contract, forfeited its block of stock and its representation on the board of directors. (Eleventh Special Report of the Commissioner of Labor, p. 602.)

The rift in the organization continued. Members of the original Local Assembly No. 300 were employed in the various factories of the American Window Glass Co., while the men in the secessionist group, the Denny organization, as it was called, continued to man the plants of the independent manufacturers. A secession movement of cutters and flatteners had preceded that of the blowers and gatherers under Denny. First the cutters and then the flatteners had revolted against Simon Burns's alleged discriminations and unfair tactics in dealing with the minority trades. They withdrew from Local Assembly No. 300 and organized separately. Thus by the end of 1900 the once all-powerful Local Assembly No. 300, which had included every skilled window-glass worker in the country, was split into three factions—one of blowers and gatherers, one of cutters and flatteners, and the 4-trade group which remained with Burns and the original Local Assembly No. 300.

It was several years before a unified 4-trade organization was again achieved, and there never was a time afterward when all the skilled window-glass workers were organized into one union. The dual unionism which grew out of dissensions within the old organization, after its 20 years of conspicuous success, remains.

## Introduction of Machinery

Developments quite unforeseen at the time of the disintegration of Local Assembly No. 300 in 1900, however, determined this continued cleavage. By the time the several warring groups of skilled workers had composed their differences and were once more, in 1908, organized into the National Window Glass Workers, the unified, 4-trade union which took the place of the old Knights of Labor organization, the first window-glass making machine was an established fact in the industry. The National Window Glass Workers adopted the policy which it maintained to the end, that of refusing to recognize the machine or to admit workers in machine plants to membership, and the skilled workers in the machine plants, the flatteners and cutters, kept the independent organization they already had in the plants of the American Window Glass Co., the first concern to turn to machine production. The cylinder drawing machine, which the American Window Glass Co. used, displaced only the gatherer and the blower. The cylinder still had to be flattened and cut, as did the hand-blown product, and that work was performed by skilled craftsmen in the machine plants exactly as it was in the hand plants.

The years between 1900 and 1904 found the industry practically demoralized. Both workers and manufacturers were divided into warring camps and the former policy of controlled output and wage agreements was discarded for deliberately unrestricted production and abrogated agreements. Wage cutting and labor stealing by the opposing unions and price cutting and suicidal competition by the manufacturers became the practice.

Meanwhile the cylinder blowing machine was looming up. It was still experimental, but had proved successful enough to be taken seriously. The wage agreement negotiated by the Window Glass Workers' Association, which was the seceding Denny group, for the

blast of October 1, 1902, to June 30, 1903, contained the following clause:

*Machine competition.*—It is understood and agreed that if any window-glass blowing machine or machines is operated to a sufficient extent to affect the market by reason of their cost of production being lower than this scale, at which time and under such conditions this scale shall be subject to revision upon demand of the manufacturers so affected by such machine or machines, the said condition to be determined by the wage committee.

Commenting on this attitude of the opposing union, Simon Burns, president of the parent body, Local Assembly No. 300, issued a statement which read in part:

There is no good reason why the workers should be put on an equality with the machine at this particular time. The question of wages should depend not on the cost of making glass by machines but the selling price of glass. If the machine-made glass is sold in the market at the same price as that made by manufacturers making hand-made glass, then there should be no reduction in wages. It ought not to depend on the machine to make wages, unless those operating them use their advantage to undersell manufacturers operating under our scale. * * *

After tanks were built some asked for special legislation and wage scales in favor of pot furnaces, claiming tanks made glass cheaper; but such concessions were not granted, and the same rule should now apply to machinery. * * *

Our organization has made a wage scale far different from the new organization. * * * Read our machine clause and note the difference. We believe it is a protection to manufacturers and workers:

"It is understood and agreed that if any window-glass blowing machines are operated to such an extent that those operating them sell glass to jobbers or consumers at a less price than is agreed upon * * * then there shall be a meeting of the wage committees party to this scale to revise wages, * * * said revision to be based on the difference existing between the present selling price and that which the parties operating machine or machines sell below the regular price of those signing this scale.

By the end of the next blast, June 30, 1904, there were three 4-trade unions in the field, each with its own wage scale and working agreement; and while agreements had been signed by the different groups of manufacturers, they were not observed.

### Amalgamation of Unions

DURING the summer of 1904 representatives of the three organizations met in Cleveland, Ohio, with a view to amalgamating. Local Assembly No. 300 withdrew shortly after the convention opened, but the other two bodies carried out the purpose of the meeting and founded the Amalgamated Window Glass Workers of America as a 4-trade organization. This union established a wage scale and working rules for the blast of October 1, 1904, to May 31, 1905, which was signed jointly by a representative group of manufacturers.

The new union prospered, in spite of opposition and encroachments by Local Assembly No. 300, and was able to enforce its agreements in the plants of the manufacturers signing them.

In 1906 the window-glass manufacturers undertook to form an organization, and asked the assistance of the officials of the Amalgamated Window Glass Workers' Association to accomplish that end. The reply of the union was that "the price of our assistance is one organization; i. e., that all plants making window glass in this country should operate only under the Amalgamated scale, and that the manufacturers pledge themselves to bring that about." (Minutes of

executive board meeting, October 6, 1906.) Specifically, so far as the union was concerned, that proposition meant the elimination of "Burns and Local Assembly 300 from the field."

This program was possible only if J. R. Johnston, who employed the members of Local Assembly No. 300 in his various plants, joined the manufacturers' association. This did not happen at that time. However, the same result was obtained six months later through a coup d'état on the part of Mr. Johnston. Mr. Johnston wanted the period of the blast shortened in order to curtail production, which was getting out of hand. The agreement between the Amalgamated and its employers ran to June 30, 1907. On February 1, 1907, President Faulkner of the union made a report to the executive board of that organization, from which the following is an extract:

> You have an opportunity to effect a settlement that will give you one organization, which means control of your trades, control of the apprentice system, control of initiations, reduced expenses, increased harmony, and better discipline throughout the entire organization, and for all this the price asked is * * * to recognize the necessity of curtailing production when the time comes in order to maintain prices and wages and to lend your assistance in bringing it about.
>
> In return for this J. R. Johnston will sign our scale, all warfare and litigation will cease, business confidence will be restored, and the entire industry will be benefited. You will be able to maintain your present wages for the remainder of this fire and pave the way for a good scale next fall. * * *.
>
> If you will agree to terminate the present scale at a time when the general condition of the business demands it, I believe I can effect a settlement of the whole matter at Pittsburgh to-morrow and return to you here with the Hartford City and Independence (the Johnston plants) scales duly signed. (Executive board minutes, February 1, 1907.)

President Faulkner received the instructions he asked for, and succeeded in his mission. He returned to the executive board meeting the next day from Pittsburgh, with Johnston's signature to the Amalgamated scale, and with an agreement that all members of Local Assembly No. 300 become members of the Amalgamated Window Glass Workers' Association by February 22, 1907. Thus Knights of Labor Local Assembly No. 300 passed out of active participation in the window-glass industry, leaving the Amalgamated almost wholly in control of the industry, except for the flatteners and cutters in the machine plants.

But the victory proved short-lived. The Cutters and Flatteners' Association continued its efforts to obtain jurisdiction over those trades in both machine and hand plants, and the Amalgamated fought to maintain its position as a 4-trade organization. This antagonism resulted in 1907 in a suit brought by the cutters and flatteners for the dissolution of the Amalgamated on the ground that it was a combination "in restraint of trade" and "opposed to public policy." The suit was successful, and the Amalgamated Window Glass Workers' Association was dissolved by order of the court.

### Rise and Growth of National Window Glass Workers

REORGANIZATION followed almost at once, with the financial assistance of the organized window-glass workers of Belgium. The new union, established under the name of the National Window Glass Workers, took over in its entirety the membership of the disbanded union, but it made material changes in its constitution in conformity with the court decision dissolving its predecessor. These changes

modified the apprentice laws, although the practice of limiting apprenticeships to sons and brothers of the men in the trade survived. Membership in the new organization, as in all its predecessors, was restricted to American citizens.

The new organization was strong enough to institute its own wage scale and working agreement for the next blast, December, 1907, to August 31, 1908. This agreement was signed by individual manufacturers, and contained, for the first time, the principle of the sliding scale which permitted the adjustment of wages to the rise or fall in the selling price of glass.

The National Window Glass Workers gradually increased and secured control of the hand manufacture of window glass. In 1908 the surviving dual organization, the Blowers and Gatherers' Mutual Protective Association, which dated back to the first secession from Local Assembly No. 300, merged with the National, and shortly afterward the Cutters and Flatteners' Association relinquished its claim to jurisdiction over workers following those trades in the hand plants, and decided to confine its activities to the skilled men in the machine plants.

Thus firmly established as the only 4-trade organization, the National Window Glass Workers assumed a position of power and prestige in the industry quite comparable to that of L. A. No. 300. By 1910 its wage committee was negotiating with the manufacturers' wage committee a wage scale and working rules which were uniform throughout the industry. The union maintained the severest sort of discipline over its members and in the observance of its regulations and trade agreements. The old policy of controlled production and regulation of the working season was reestablished by mutual agreement between the manufacturers and the union. As a manufacturer expressed it some years later to the United States Tariff Commission, the union representatives "work with us to maintain the trade."

The union decreed that any member going to work in a machine plant automatically suspended himself from membership in the union, and could not return to membership and employment in a hand plant without the payment of a fine and a reinstatement fee. The sentiment generally was that the line between hand and machine workers should be definitely drawn, and that workmen should identify themselves unmistakably as hand or as machine operatives. The practice of hand blowers of taking positions in the machine plants during the summer suspension of the hand plants was penalized by fines. Manufacturers who during the transition period tried to operate under both systems were refused a scale by the union. Since no blower or gatherer could work in a plant which had no scale and keep his union standing, that meant that manufacturers also had to align themselves definitely as hand or machine concerns.

Nevertheless the machine was steadily gaining ground. While several different makes of machine were in use, the American Window Glass Co., operating the Lubbers cylinder drawing machine, really held the field. Its machine was the most efficient and the most successful, and the company controlled the patent on it and refused to grant licenses for its use to outside interests. Hence the American Window Glass Co. had no serious competition from other machine producers, and because of its capacity advantage over the hand plants it could practically control output and dictate prices.

## Trade War

THE union scale for the blast of October 15, 1910, to May 31, 1911, signed by the wage committees of workers and employers, provided an increase of about 40 per cent above the scale of the preceding fire. Factories had been in operation under this scale less than three months, however, when the whole situation in the industry changed radically. First the Imperial Window Glass Co., which was the selling agency of the hand manufacturers, was dissolved by court action. That created a disturbed condition of the market and was followed almost at once by a drastic cut in prices on the part of the American Window Glass Co. Union officials conceded that maintenance of the scale was impossible in view of changed conditions and consented to a revision. At a meeting of the executive board called January 27, 1911, to discuss the situation the president of the union expressed the opinion that unless the crisis was met it would be a matter of a very short time before hand manufacturers would be forced out of business. A new wage scale was adopted which reduced wages materially and contained a clause which provided that the wage committees should again be called together to meet changed conditions in the event the American Co. declared further reductions.

This second scale held till the end of the blast and was followed by an agreement for the next season which reduced wages still further. In place of the clause in the preceding scale calling for a meeting of the wage committees should the American Co. cut its prices, the 1911 agreement permitted a reduction in wages of 1 per cent for each discount point below the current selling price of glass.

Price cutting between the hand and the machine interests went on with increasing intensity, and for the first month of operation under the new scale "the basis from which wage scales were figured to-day changed by to-morrow, necessitating further changes in wage rates." To quote an official publication of the union:

> Conditions went from bad to worse. Unheard-of prices were quoted and it seemed as though bottom for low prices could never be reached * * *. Under these conditions the workers were confronted with the alternative of either accepting further reductions in wages or witnessing the closing down of factories. The former was accepted and the most radical reductions accepted.

These reductions were, broadly, a 30 per cent cut below the prevailing very low rate, with the proviso that revision upward to the prevailing rate was to follow increased prices, but if the American Window Glass Co. announced any further price cuts while the scale was in effect, "the condition will be met."

While that scale held, wages amounted to $15 a week or less. The attitude of the hand workers was expressed by the president of the union when he said:

> Every concession has been made in order that plants might resume operation, because we realize that our struggle against the machine interests can not be decided by the operation of a few hand plants. We are hoping to bring about a condition under which the machine interests will be forced to recognize that the hand workers are entitled to a certain amount of production, and that the quoting of low prices will not bring about a condition under which hand glass can not be produced.

During the winter both camps of manufacturers apparently decided that matters had gone far enough. They called a conference in February, 1912, which resulted in retraction from their cutthroat

policy of the past two years, and a concerted effort to stabilize conditions in the industry. The outcome of that conference was another wage adjustment which put into effect, for the remaining two months of the blast, a much better rate, with further increases contingent upon the continued advance in selling price.

Commenting on the outcome of the efforts to preserve the hand trade, on the part of both workers and manufacturers, President Neenan of the union said:

> I believe we have demonstrated to the machine interests that it is possible to make glass by the hand method that can be marketed in competition with their low prices. We have demonstrated this in the only way possible for us to make any impression on the machine interests—by making hand glass that could be sold at all times in competition with the machine product. To-day the machine interests are just as anxious for better prices and better conditions as any hand manufacturer can be.

The truce established in 1912 ended the ruinous trade war between the hand and the machine producers, and the business settled down to several years of stability and prosperity. Union strength and earnings of the men in the trade increased proportionately. By 1915, according to a statement made by President Neenan, wages had increased more than 100 per cent above the scale at which the men had worked during the struggle of four years before. The working period became standardized to seven months in the hand plants, usually from November 1 to May 29. Products of the American Window Glass Co. did not enter so directly into competition with the hand plants as formerly, because the company was dealing largely in photographic glass and in a heavy specialized glass designed as a substitute for plate glass, which hand plants could not duplicate and which therefore caused them less worry than it did the plate-glass makers.

### Effects of European War

THE next economic disturbance to engage the combined efforts of manufacturers and workers in the hand trade, which seemed at first to threaten another struggle for existence, was the tariff revision under the Underwood measure of 1913. They succeeded in securing some modification of the drastic cuts in rates as originally proposed, but the bill passed carrying an average reduction, on all sizes, of about 45 per cent. It was at first feared that with the lowering of the duty the market for the small-sized panes would be closed entirely to the American manufacturer, because he would not be able to compete with the Belgian producers.

Before any material consequences of the new tariff had been felt in the American market, however, the European War broke out and Belgium, the principal glass-producing country, stopped manufacturing.

For the next several years the American manufacturer held the field not only in the home market but in the export trade. The scale for the 1915–16 blast carried an increase of 3.5 per cent, and before its expiration a second increase of 7.5 per cent was granted. The wage scale for the next blast was an advance of 20 per cent above the preceding rate.

Many adjustments were necessary to meet war conditions after the United States entered the war. The glass industry was declared

nonessential and ordered to curtail its production 50 per cent. Out of that grew the 2-period system which outlived the war and was practiced by the hand plants for about five years longer. Under that system half the plants operated for the first half of the working period and half during the second period, each group, of course, remaining idle while the other group was in blast. By combining that system with a 4-shift system instead of three, employment was fairly steady for the men who remained in the trade.

## Postwar Developments

THE years following the war were attended for the window-glass industry, as for all others, by ups and downs, but, generally speaking, with stability and gradually increasing prosperity. The automobile business reacted favorably on the industry, as did, later, the building revival.

Wages stayed up, but opportunities for work decreased. Before the war closed a new angle had presented itself. As an old hand manufacturer expressed it, "hardly has the cylinder-drawing machine been made a commercial success before we are confronted with a sheet-drawing machine that threatens the cylinder process of to-day." The United States Bureau of Foreign and Domestic Commerce observed in 1917 that—

> All window glass manufacturers are dreading the time when glass will be made in flat sheets by the Owens Bottle Machine Co. under the Colburn patents which it controls. They fear that by the new process window glass can be made much cheaper than by any other process that has been used in the United States; that with the cheaper production there will be an intense competition in the window-glass market; and that the weaker establishments will be forced out of business. (Miscellaneous Series No. 60; the glass industry, p. 205.)

As a union official put it, "the American Window Glass Co. came out of the war with the immense advantage they had gained and with the competition from the old hand plants pretty nearly gone, only to find themselves face to face with an instrument that is now doing to the cylinder process just what the cylinder process did to the old hand craft."

This new sheet-drawing process, by making glass in a flat sheet instead of a cylinder, eliminates the flattening process. Under that system, then, the third skilled worker, the flattener, joins the gatherer and the blower in the discard.

In 1918 the president of the National Window Glass Workers reported that—

> The sheet machine up to the present time has not produced in such volume that any one concerned in the hand industry need fear that this method, because of efficiency or cheapened methods of production, is likely to become a serious menace to the industry within the near future.

Less than two years later, President Neenan and a committee from the hand workers' union, visited the Libbey-Owens sheet-drawing machine plant, and in his report to the membership on that visit he described the machine and its processes, the kind of glass produced, and the number and kind of labor force involved in production. The conclusion of that report reads:

> It is hoped that no undue alarm will be experienced because of what is stated in this report. The executive board believes it best that the plain truth be told concerning the sheet machine.

## Hand Industry Weakens

By 1922 the hand industry was feeling the encroachment of the sheet-drawing machine plants in two ways—in the loss of workmen, who were going into the machine plants, and in the closing down of many hand plants which could no longer meet the machine competition. One element in the union contended that to survive at all the union must adjust itself to the changing conditions and expand its field to take in the machine plants. A resolution looking toward that end, so worded as to give the union jurisdiction over semiskilled and unskilled labor in the machine branch while retaining the skilled handicraftsmen, was decisively defeated in referendum. The skilled glass workers had declared once more, as in connection with the snappers they had repeatedly done throughout their history as an organization, that they were a handicraft guild and would so remain.

Internal dissension and bickering in the union developed as employment opportunities for the members grew less and less. The 2-period and 4-shift systems became a storm center, with charges and countercharges of discrimination, favoritism, and bad faith. Finally the Federal Government was drawn into that quarrel by a court action under the Clayton Antitrust Act, brought on the charge that manufacturers were restraining trade by the continued practice of keeping down production by dividing the operating season into two working periods. The case went to the Supreme Court of the United States, with the union and the manufacturers' association as appellants. Mr. Justice Holmes rendered the decision, which reads in part:

> The dominant fact in this case is that in the last quarter of a century machines have been brought into use that dispense with the employment of the highly trained blowers and trained gatherers needed for the hand-made glass, and in that and other ways have enabled the factories using machines to produce window glass at half the cost of the hand-made glass. The price for the two kinds is the same. It has followed, of course, that the companies using machines, or, more specifically, the American Window Glass Co., fix the price, that they make much the greater part of the glass on the market and probably, as was testified by the defendants, that the hand makers are able to keep on only by the sufferance of the others and by working longer hours. The defendants say, and it is altogether likely, that the conditions thus brought about and the nature of the work have driven many laborers away and made it impossible to get new ones. For the work is very trying, requires considerable training, and is always liable to a reduction in wages if the American Window Glass Co. lowers the price. * * * Manufacturers of this kind obviously are not able to do more than struggle to survive a little longer before they disappear, as human effort always disappears when it is not needed. * * *
>
> There are not 2,500 men at present in the industry. The Government says that this is the fault of the union; the defendants, with much greater probability, say that it is the inevitable coming to pass.

Economic conditions rather than legal uncertainty, however, had already ended the 2-period, 4-shift system, and the business was back on a normal basis before the Supreme Court gave the manufacturers legal sanction to continue the system.

The blast of 1924–25 was the last for which a scale was negotiated and signed jointly by the wage committees of the union and the manufacturers' association. The wage rate represented a 25 per cent reduction from that of the preceding blast, and it is significant that the period of operation for that scale was September 15, 1924, to

September 15, 1925. The announcement promulgating the scale said:

> This is what might be termed a yearly scale, and it gives the manufacturer permission to operate the entire year or any part of it, thus enabling him to compete with the machine in placing his glass on the market at any and all times.

The next year the few hand plants which went into blast signed the scale presented by the union as individual manufacturers, and the manufacturers' wage committee did not function again. Perhaps that was largely due to the fact that the man who for years had been chairman of the manufacturers' wage committee left the hand industry to become identified with the sheet-drawing process, and the hand producers were too weak and too scattered to choose a new leader.

### Evidences of Union Disintegration

THE official records of the National Window Glass Workers for the year 1924 show a succession of events and conditions which proved, in the light of later developments, to be hurrying the organization to certain death. The plants which opened in the fall of 1923 did so without a universal scale. In the annual negotiation the wage committees failed to come to an agreement, and the scale was submitted to manufacturers for their individual acceptance. Private agreements crept in, and the union was no longer in a position to enforce the old disciplinary measures. A joint scale was signed in December, 1923, but it was most unfavorably received by the men. The old hand plants were rapidly passing and unemployment increased distressingly. Members made repeated requests for financial relief such as the union had granted in 1921 to meet an unemployment and wage reduction crisis. At that time the union made a grant of $50 to each member asking for it. What had started out as an emergency loan was directed by referendum vote to be made a gift instead, and $216,000, almost exactly half of the union's treasury, was refunded to the membership between April, 1921, and July 1, 1922. Naturally, the union was not financially in a position to repeat that experience when the members again asked for money grants, and the officials made themselves unpopular by saying so.

Frequently during the year, members of the executive board tendered their resignations as officers and as members of the union to take employment in the machine plants. Even so formal a matter as the annual audit contained unmistakable signs of a decay that could not be stopped, for it showed that during the fiscal year ending June 30, 1924, more than half the annual income of the organization had been paid out in death claims.

### Union Attempt at Manufacturing

BY THAT time the treasury had been practically depleted because of a diversion of funds to the National Window Glass Manufacturing Co. The union decided to enter the hand manufacturing business, and for that purpose leased a plant in Huntington, W. Va., which commenced operations in March, 1924. Stock in the company was offered to the membership, but no appreciable part of the working capital was received from that source. The union held shares in the corporation to the amount of $76,000, and shortly after the plant

went into blast a loan of $50,000 was made from the union funds, the union in fact selling its Liberty bonds for that purpose.

One of the chief purposes in operating their own plant was, of course, to give employment to union members thrown out of work by the constant contraction of the hand industry, but according to one of the men who took an active part in both the union and the company that plan missed fire. Workers left jobs to work in the union plant, and some of the factories which were thus left undermanned closed rather than wait for other workers to come in to fill the vacant jobs and never reopened.

The National Window Glass Co. operated for three years, producing glass which it sold at less than cost, and never made expenses. It closed in the spring of 1927 with a net loss of $84,000.

### Comparative Quality of Hand and Machine Glass

For several years after machine-made glass appeared in the market, it was considered an inferior product. By 1917, according to the report of the Bureau of Foreign and Domestic Commerce on the glass industry, "hand manufacturers usually admit that the quality of the machine-made glass is constantly being improved." (Miscellaneous Series No. 60, p. 200.) During that year a committee of the union made a comparative study of the quality of the glass made by hand and by machine and submitted a report thereon. The report is technical, but it criticizes freely the defective work turned out by the hand plants. It concludes:

> It is plain to us that the efforts made by the machine manufacturers to place a high standard of quality on the market have covered a period of years, during which time the hand industry has followed the standards of the past. Such standards do not apply to-day, and a thorough realization of this fact should be arrived at quickly by both the membership of our association and the window-glass manufacturers in order that a grade of glass may be placed on the market superior to any machine product. In order to overcome the defects which were apparent to us, it is necessary that the work which must be undertaken in this direction must be done jointly; the manufacturer must assume his share of the responsibility, and we, as workers, must set ourselves earnestly to correct, in so far as possible, the errors of the past, whether due to carelessness or defective workmanship. * * *
>
> We find that the quality of hand glass in most instances is such that the complaint made by buyers of window glass are worthy of our best and most earnest consideration.

A few years later one of the big jobbing companies reported to a union official that "the indifferent sorting of the hand glass supplied to them has become so pronounced that some of their customers are now stipulating American machine-made glass when ordering." Still later glazing contractors began a concerted demand for machine-made glass, in some cases even specifying sheet machine glass.

The sheet-drawing machine interests advertised their product extensively and apparently so effectively that not only the hand glass but the cylinder machine product began to feel it. In 1924 the American Window Glass Co. reported that—

> The introduction of the flat-drawn sheet process has created a demand from a portion of the trade for glass that is "flat" as distinguished from the glass that is slightly bowed when flattened by the old-time processes. In order to meet this requirement of a part of the trade, we made a careful study of our flattening process and have succeeded in perfecting a new process of flattening and annealing whereby we are able to turn out glass as flat as that produced by the sheet-drawn

process. We are now producing this flat glass regularly at all of our factories in order to place our product on the same footing as the sheet-drawn glass.

### Second Sheet-Drawing Machine Appears

NOT long after the American Window Glass Co. had made this concession to the sheet glass machine the Libbey-Owens sheet-drawing enterprise met new competition from another quarter, the introduction into this country of the Belgian sheet process on the Fourcault machine, the expiration of the patents on which permitted its installation here.

After an extensive survey of the industry in 1927 the president of the National Window Glass Workers reported that in his observation and opinion—

> The cylinder machine plants will be compelled to adopt a sheet-drawn method of production within a comparatively short time if they are to remain in the business. This opinion is now universally held by the cylinder machine manufacturers themselves, and practically all of them are laying plans for the installation of sheet machines within the next two years. Some of them are now doing so, while others have a definite time for doing so.

### Convention and Dissolution of Union

THROUGHOUT the steady decline of the hand industry and the rise of the sheet-drawing process the more progressive element in the union—or at any rate the element most disposed to adjust to modern conditions—continued to agitate for an expansion of the organization to meet the expansion of the industry. Realizing and in effect conceding that the hand industry was irretrievably gone, the membership of the National Window Glass Workers, by referendum, consented to the calling of a convention in 1927. This convention, the first and the last in the history of the union, met in Cleveland, Ohio, in May, 1927, and took two decisive steps. It ruled that members could accept work in machine plants and still retain their membership and standing in the union, and it decided upon an intensive organizing campaign in the machine plants. This campaign was to honor strictly the jurisdictional claims of the organizations already operating in the machine plants. There are three of these organizations—the original Window Glass Cutters' League, the Window Glass Cutters and Flatteners' Association, and the Window Glass Cutters and Flatteners' Protective Association. The last-mentioned organization is confined to the plants of the American Window Glass Co.; the other two operate in the independent plants.

An organizing fund of $10,000 was appropriated by the convention. Retrenchments were made wherever possible, and in pursuit of that policy union headquarters were moved from Cleveland to Columbus. It was agreed in convention that if a year's effort to organize the sheet machine plants did not serve to rehabilitate the National Window Glass Workers the organization would voluntarily disband.

The organizing campaign concentrated on the Libbey-Owens plants in Clarksburg, W. Va. The attempt was soon given up, however, as the organizers met not only indifference on the part of the workmen but strong opposition from the management, whose unskilled workers were employed under individual contracts.

Declaring the situation hopeless and the organizing campaign a failure, the executive board of the union met on June 29 and 30, 1928,

and formally disbanded. Business and financial affairs were closed, and the money remaining in the treasury after all the obligations of the union were met was distributed at $1 per capita to the 879 members in good standing at the time of the dissolution.

## Present Employment Status

UNEMPLOYMENT among window-glass workers always had a peculiar significance which would probably not nowadays be found in any other calling. Ordinarily when a man is thrown out of a job because of slack work in his trade other wage earners in his family, who may be employed in other lines not affected by the depression which has dislocated him, can help to tide over the slack period. In window-glass making conditions were markedly different. Glass workers inherited their craft from their fathers and passed it on to their sons, and it was the almost universal custom that all the male members of a glass workers' family followed one of the four trades in the industry. Moreover, they married the daughters and sisters of their fellow glass workers. Hence depression and unemployment in the window-glass industry fell heavily indeed upon all connected with it. To add to the problem, the old hand factories were, as a rule, grouped in small communities in the natural-gas areas and often represented the only employment opportunities in the vicinity. To be sure, window-glass workers habitually moved about in search of work during the idle period at the plants, but that was incidental to their chief calling, and it seems to have been inherent in all who followed the craft to give it up definitely only under the severest compulsion.

Distress and even catastrophe were not infrequent accompaniments of depressions in the industry throughout the recorded history of the organized workers. It is of very real human interest to follow up, so far as possible, the fortunes of these skilled craftsmen whose skill industry no longer needs.

After the hand plants had ceased operations entirely, the last president of the union undertook by means of a questionnaire to find out what had become of its old members. He secured information concerning the activities of 605 of them. One hundred and five were unemployed, and most of them had had no work since they left the glass factories. While the element of age did not enter into the inquiry, it is, of course, possible that many of the 105 unemployed were old men.

The glass industry had reabsorbed 21.2 per cent of the 500 who had employment; of these 68, or 13.6 per cent, were in the machine window-glass plants and 38, or 7.6 per cent, in other branches of the glass industry, chiefly bottle making. While processes in hand and machine manufacture bear no relation to each other, still the familiarity of the hand craftsman with molten glass, the working medium in both cases, often makes him a valuable acquisition in the machine plants. Not infrequently during the organization of the sheet-drawing business the most highly skilled men in hand manufacture found excellent opportunities as foremen and technical men in the new line, especially in instances where the management of the plants was not experienced in glass manufacture.

The largest single group, 183, or 36.6 per cent, is reported as "common laborers"; 39 have gone into the building trades and 17 into automobile and allied industries. The report gives 120, or 24 per cent, as "unclassified," but a review of the returns of the questionnaire gives opportunity to scan that all-embracing category and develops an interestingly wide range of occupations. A hotel manager, a prison guard, a number of police and firemen, several farmers, and a newspaper man were once window-glass workers. One man is running a rooming house and two others have set up in the pool-room business. Paper mills and rubber factories have assimilated a few, 12 were reported as being in railroad employment, and 23 in clerical work. The former president of the union is now in business for himself as a glazing contractor.

### Readjustment in Belgium

POINTING out to the membership that "the passing of the hand industry is not peculiar to this country," President Siemer of the union called attention to a consular report dated some time in 1927 which says:

> It is clear that the great Belgian industry of hand-blown window glass is a thing of the past. Some of the old-fashioned plants continue working in order to avoid turning their labor out of work and others are manufacturing special glass, but the Fourcault machines have proved themselves incontestably superior and have revolutionized the practice of the Belgian glass industry. This drastic change has exercised a considerable repercussion on the labor situation in this district in that the Fourcault machines produce more glass with fewer workmen and the situation of the highly skilled glass blower is not promising. Many of them have accepted positions in plants in other countries, others have adapted themselves to handle Fourcault machines, and others have given up the glass work.

In that connection, in an interview with the Bureau's representative, Mr. Siemer made the point that the marked difference in the development of the industry in Belgium and the United States was in the attitude of the organized workmen. The Belgian union, always as strong economically as was the American, recognized the inevitable and changed with the industry from skilled craftsmanship to machine operation, and accordingly maintained its position as a force in the industry. That point of view the American workers steadfastly refused to adopt. As Mr. Siemer sees it—

> No human agency could have saved the hand craft. It was in the way of progress and it had to go. Human agencies could have saved the organization, but they chose not to do so, and the organization, too, passed into history. The mistake we made was in clinging to the old guild idea. That has no place in modern American industry.

### Survival of the Cutter

NOT the least interesting angle of the whole story, in the view of a young official of one of the cutters' unions, is the fact that the cutter, "always the under dog, too weak numerically to be militant in his own interests, never strong enough to acquire leadership or office, is now the sole survivor, the heir of the old skilled craft and its traditions. The cutter is having his day now, after the majority trades of the old days are gone."

But just possibly his day, too, will pass. Already the prediction has been made that "the method of 'scoring' the sheet glass as it comes through one of the present processes may in time eliminate the cutter as well."

## Length of Service and Wages

By H. Larue Frain, Industrial Research Department, University of Pennsylvania

IN MAKING wage comparisons, length of service is a factor which seldom is given any attention. Whether this disregard is deliberate or unintentional is usually not clear, but the importance of this factor is likely to be especially marked in occupations and trades where shop experience is rated very high if not preferred to formal apprenticeship training.

Difference of opinion as to the relation of length of service to wage rates led a group of employers to cooperate in a survey [1] to ascertain the situation with regard to certain outstanding occupations of modern industry.

The occupations selected were the operation of drill presses, milling machines, turret lathes and screw machines, and engine lathes. These are standard machine-tool occupations and are among the occupations which are important, either directly or indirectly, wherever speed, accuracy, and power are required in production. A group of representative metal manufacturing plants supplied detailed data for all of their employees in these occupations for the years 1925 and 1926.[2] The information so supplied covered (1) the actual earnings week by week, (2) the actual working time week by week, and (3) the service record of employees.

In analyzing the data the following service groups have been used: Short service (under 1 year); moderately long service (1 year and under 5 years); long service (5 and under 10 years); and very long service (10 years and over). There is nothing final in this classification, although the periods were adopted after much experimenting and are thought to be those under which the differences in earnings are most marked.

On the basis of these data it became possible to consider three questions: Is there any relation between length of service and wages—hourly, weekly, and yearly? If so, does the average wage for an occupation approximate consistently the average for any service group? If wages tend to increase with length of service does it appear that a large proportion of the men in these occupations tend to be in the service groups with highest wages?

### Relation of Length of Service to Wages

THE general relation [3] between length of service and wages in each of the selected machine-tool occupations is shown for both 1925 and 1926 by Chart 1. Here the heavy lines show the average earnings for each service group, while the broken horizontal line represents the average for the occupation. At the bottom of the

[1] The author desires to acknowledge his indebtedness in directing the survey to members of the Industrial Research Department of the University of Pennsylvania, particularly to Dr. Anne Bezanson, associate director of the department, and to Miss Miriam Hussey. Mr. Earl Sparks, secretary of the Metal Manufacturers' Association, of Philadelphia, gave very valuable assistance.

[2] These years were selected because they were at the time the survey was undertaken the most recent years for which complete data could be obtained conveniently. The data for 1925 cover 11 plants with 652 men in the selected occupations, and the data for 1926 cover 13 plants with 1,086 men.

[3] For a more detailed analysis showing the situation by plants see An Examination of Earnings in Certain Standard Machine Tool Occupations in Philadelphia, by the present writer, which is to be published by the University of Pennsylvania Press.

CHART I.—AVERAGE EARNINGS BY LENGTH OF SERVICE IN SPECIFIED OCCUPATIONS IN 1925 AND 1926

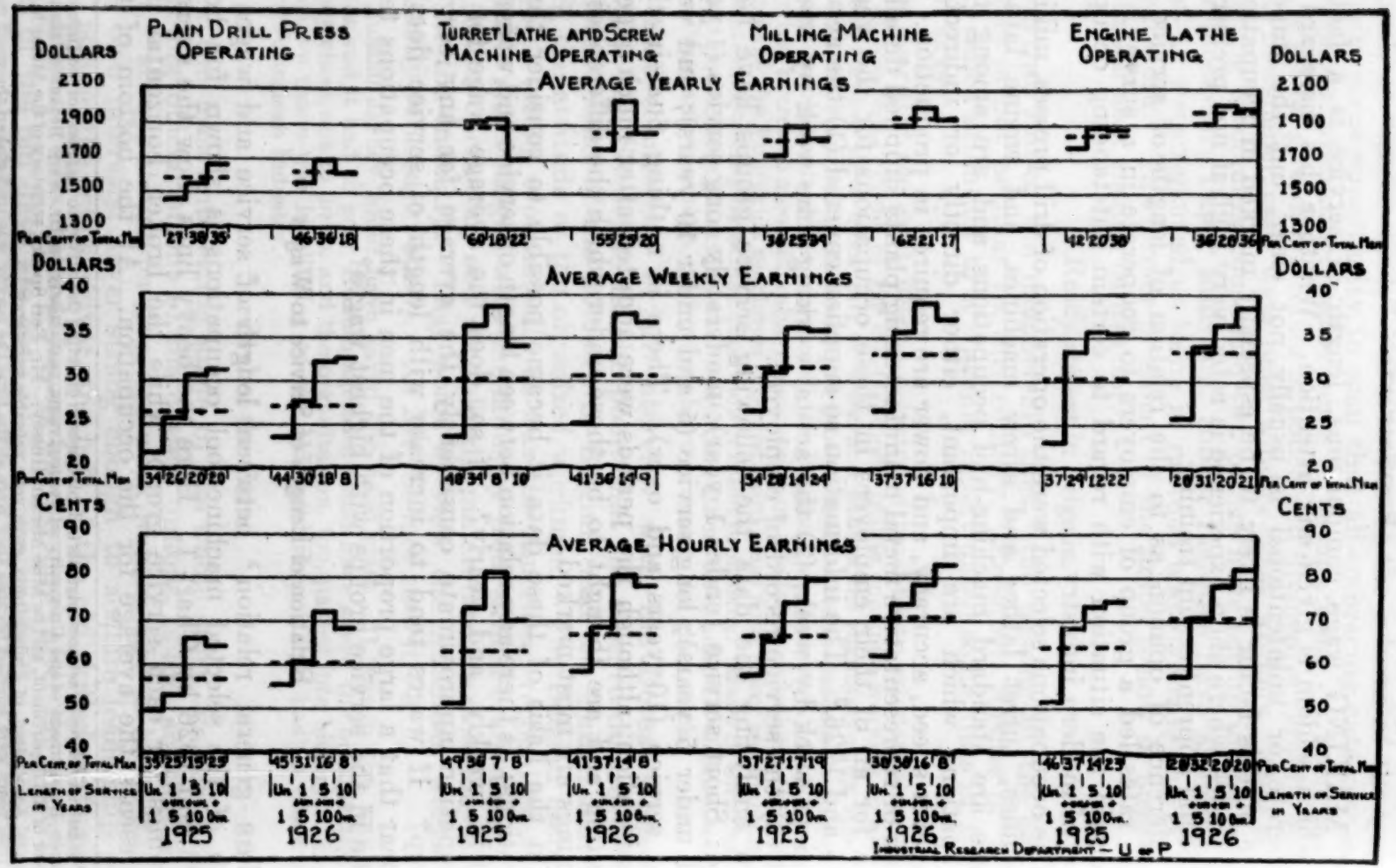

chart are shown the year, the service periods, and the percentage of the total number of men in each period, while the scale of earnings is shown along the side and the occupations are given at the top. The data on which this chart is based are given in Table 1.

TABLE 1.—AVERAGE HOURLY, WEEKLY, AND YEARLY EARNINGS, BY LENGTH OF SERVICE, FOR SPECIFIED OCCUPATIONS IN 1925 AND 1926

| Occupation | Average hourly earnings | | | | Average weekly earnings | | | | Average yearly earnings [1] | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Under 1 year | 1 year and under 5 years | 5 and under 10 years | 10 years and over | Under 1 year | 1 year and under 5 years | 5 and under 10 years | 10 years and over | 1 year and under 5 years | 5 and under 10 years | 10 years and over |
| **1925** | | | | | | | | | | | |
| Operation of— | | | | | | | | | | | |
| Plain drill press | $0.497 | $0.534 | $0.663 | $0.645 | $21.84 | $25.76 | $30.51 | $31.32 | $1,462 | $1,566 | $1,699 |
| Milling machine | .579 | .654 | .743 | .797 | 26.84 | 31.18 | 36.18 | 35.85 | 1,735 | 1,900 | 1,831 |
| Turret lathe and screw machine | .514 | .730 | .812 | .703 | 23.61 | 36.40 | 38.51 | 34.16 | 1,925 | 1,945 | 1,707 |
| Engine lathe | .518 | .689 | .739 | .747 | 23.03 | 33.69 | 35.82 | 35.67 | 1,774 | 1,882 | 1,874 |
| **1926** | | | | | | | | | | | |
| Operation of— | | | | | | | | | | | |
| Plain drill press | $0.552 | $0.605 | $0.721 | $0.686 | $23.74 | $27.73 | $32.19 | $32.35 | $1,562 | $1,699 | $1,617 |
| Milling machine | .620 | .742 | .789 | .830 | 26.77 | 35.80 | 39.07 | 37.48 | 1,899 | 2,077 | 1,943 |
| Turret lathe and screw machine | .586 | .688 | .807 | .784 | 25.12 | 32.82 | 37.90 | 36.85 | 1,768 | 2,045 | 1,853 |
| Engine lathe | .579 | .712 | .785 | .822 | 25.87 | 34.08 | 36.56 | 38.57 | 1,907 | 2,015 | 1,998 |

[1] Only those men are included who worked 49 pay periods (weeks) or more.

As is shown the average hourly earnings tend to increase as length of service increases. This tendency is without exception in milling-machine and engine-lathe operating for both years; in the other occupations, however, the average for the men of longest service is not the highest. In milling-machine operating for 1925 the tendency is shown in its most regular form. Here the averages for short, moderately long, long, and very long service groups are 57.9 cents, 65.4 cents, 74.3 cents, and 79.7 cents, respectively.

If all plants had the same normal time and if the men actually worked a uniform number of hours per week, then differences in weekly earnings would be directly proportionate to those differences shown in hourly earnings. However, plants do not have the same normal time [4] and the degree to which actual time differs from normal time within a plant is not the same for all plants at a given time nor is it the same for given plants at different periods of time. Nevertheless, the same tendency noticed with hourly earnings appears as regards weekly earnings. Such exceptions as occur are found in the group with the longest service.

In considering the average yearly earnings, attention is centered on a much smaller group in each occupation than was the case with either hourly or weekly earnings. In the first place, a year is defined

[4] The normal or standard time in most of the plants was less than 50 hours per week.

here as 49 weeks or more and this automatically excludes all the short-service men. In the second place, those men who did not work 49 weeks or more in the calendar year, even though they had long-service records, were excluded. When these exclusions are made only about 40 per cent of all the men each year are available for the comparison of yearly earnings.

From the upper part of the chart it appears that the average yearly earnings of long-service men are higher than those for men with moderately long service records. There is, however, only one case (plain drill-press operating in 1925) where the men with very long-service records have an average in excess of that for the immediately preceding group. Thus it does not appear that there is in general any economic advantage for length of service when it is 10 years and over.

As a matter of fact, all the exceptions to the statement that wages vary directly with length of service are found in the group where the workers have the longest service records—10 years and over. The only occupation where this exception occurs on all three bases—hourly, weekly, and yearly—and in both years, is turret-lathe and screw-machine operating. To what extent these exceptions are representative and to what extent they arise out of too meager data is not known at this time. It is very likely that there is in the operation of the selected machine tools, and especially those just mentioned, some point beyond which efficiency is not increased, and may decline, by longer service. Of course, even where this is true in general, there may be exceptions in individual cases, and even when efficiency tends to decline it may remain relatively high.

The conclusion that wages tend, within limits, to vary directly with length of service is based primarily on the general situation, but is supported by the situation in individual plants.

There is, of course, some relation between age and length of service, but age does not appear to be nearly so important as length of service. Most of the men in these occupations are in the prime of life. Table 2 gives the distribution of ages, by occupations. About 75 per cent of the men in 1925 were under 42 years of age and a like proportion under 40 years in 1926, while in both years 90 per cent were 22 years of age or over. Furthermore, the general age level in the individual occupations does not vary much from that in the combined occupations. Thus, in 1925 the average age for 531 men is 34.2 years while the lowest average in any single occupation is 33.4 and the highest is 35.3 years.

Even though the men in these occupations are in the prime of life and even though the general age level is much the same in the different occupations, it may still be thought that the short-service workers are primarily boys or very young men, and hence relatively inexperienced workers. That such is not the case is seen by Table 3, which gives average ages by length of service and occupations. In no occupation is the average age for short-service men less than 26 years and the average runs as high as 32 years. Moreover, there is only a very slight tendency for the average age to be higher for the moderately long than for the short-service group. It appears therefore that, so far as age is any indication of general experience, there is no reason to suspect that short-service men are primarily inexperienced individuals.

TABLE 2.—DISTRIBUTION OF AGES BY OCCUPATIONS

| Age | 1925 Operation of— | | | | | 1926 Operation of— | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Plain drill press | Milling machine | Turret lathe and screw machine | Engine lathe | Total | Plain drill press | Milling machine | Turret lathe and screw machine | Engine lathe | Total |
| Under 16 years | 1 | | | | 1 | 1 | | | | 1 |
| 16 and under 18 years | 1 | | | | 1 | 4 | 2 | 4 | | 10 |
| 18 and under 20 years | 4 | 4 | 4 | 12 | 24 | 5 | 2 | 6 | 5 | 18 |
| 20 and under 22 years | 6 | | 7 | 15 | 28 | 8 | 4 | 19 | 15 | 46 |
| 22 and under 24 years | 6 | 3 | 6 | 19 | 34 | 23 | 17 | 14 | 19 | 73 |
| 24 and under 26 years | 2 | 4 | 15 | 23 | 44 | 14 | 15 | 23 | 13 | 65 |
| 26 and under 28 years | 4 | 4 | 16 | 17 | 41 | 12 | 31 | 20 | 21 | 84 |
| 28 and under 30 years | 6 | 11 | 18 | 13 | 48 | 16 | 24 | 40 | 24 | 104 |
| 30 and under 32 years | 2 | 8 | 20 | 14 | 44 | 15 | 18 | 23 | 27 | 83 |
| 32 and under 34 years | 6 | 4 | 14 | 10 | 34 | 16 | 17 | 21 | 18 | 72 |
| 34 and under 36 years | 2 | 4 | 10 | 6 | 22 | 11 | 10 | 17 | 19 | 57 |
| 36 and under 38 years | 3 | 7 | 18 | 8 | 36 | 6 | 17 | 25 | 13 | 61 |
| 38 and under 40 years | 6 | 2 | 15 | 4 | 27 | 10 | 9 | 18 | 11 | 48 |
| 40 and under 42 years | 1 | | 12 | 10 | 23 | 11 | 9 | 12 | 17 | 49 |
| 42 and under 44 years | 1 | 5 | 10 | 8 | 24 | 5 | 9 | 11 | 15 | 40 |
| 44 and under 46 years | 3 | 2 | 9 | 7 | 21 | 10 | 3 | 7 | 9 | 29 |
| 46 and under 48 years | 2 | 2 | 1 | 8 | 13 | 4 | 3 | 7 | 11 | 25 |
| 48 and under 50 years | 3 | 3 | 1 | 5 | 12 | 5 | 2 | 1 | 3 | 11 |
| 50 and under 52 years | 1 | 1 | 2 | 2 | 6 | 1 | 3 | | 7 | 11 |
| 52 and under 54 years | 1 | 1 | 1 | 4 | 7 | 1 | 2 | 3 | | 6 |
| 54 and under 56 years | 2 | 1 | | 2 | 5 | 3 | 2 | | 6 | 11 |
| 56 and under 58 years | 2 | 1 | | 6 | 9 | 2 | 1 | | 2 | 5 |
| 58 and under 60 years | | 2 | 2 | 6 | 10 | 2 | 2 | | 8 | 12 |
| 60 and under 62 years | 1 | | | 1 | 2 | 1 | | 2 | 2 | 5 |
| 62 and under 64 years | | | | 1 | 1 | 1 | | | 1 | 2 |
| 64 and under 66 years | 2 | | 2 | 3 | 7 | 1 | | 2 | | 3 |
| 66 and under 68 years | | 1 | | 2 | 3 | 2 | 1 | | 2 | 5 |
| 68 and under 70 years | | | | | | | | | 1 | 1 |
| 70 and under 72 years | | 1 | | | 1 | | 1 | | | 1 |
| 72 and under 74 years | 1 | | | | 1 | 1 | | | | 1 |
| 74 and under 76 years | | | | 1 | 1 | 1 | | | 1 | 2 |
| 76 and under 78 years | 1 | | | | 1 | | | | | |
| Total men | 70 | 71 | 183 | 207 | 531 | 192 | 204 | 275 | 270 | 941 |
| Average age | 35.2 | 35.3 | 33.4 | 34.1 | 34.2 | 33.5 | 32.4 | 31.7 | 34.9 | 33.2 |

On the other hand the average age for workers with service records of five years and over is considerably higher than for those having records of less than five years. Incomplete records as to the age of the men with very long service records prevents interesting comparisons at this point.

The conclusion to our first question is that in the selected standard machine-tool occupations manned by relatively mature men wages tend to increase with length of service, subject to a possible exception in case of workers with service records of 10 years or more.

TABLE 3.—AVERAGE AGES BY LENGTH OF SERVICE AND OCCUPATIONS

| Occupation | 1925 | | | 1926 | | |
|---|---|---|---|---|---|---|
| | Under 1 year | 1 year and under 5 years | 5 years and over | Under 1 year | 1 year and under 5 years | 5 years and over |
| Operation of— | | | | | | |
| Plain drill press | 26.6 | 32.7 | 44.3 | 30.4 | 30.4 | 41.9 |
| Milling machine | 32.1 | 28.8 | 42.9 | 30.8 | 30.5 | 37.5 |
| Turret lathe and screw machine | 31.6 | 32.9 | 39.2 | 29.0 | 30.7 | 38.2 |
| Engine lathe | 28.2 | 29.6 | 44.2 | 31.1 | 30.2 | 41.3 |

### Relation of Average Wage for an Occupation to Average for Different Service Groups

In view of the conclusion reached as to the first question with which this paper is concerned, it is in order to consider whether or not an average wage for an occupation appears to have any significance in connection with wage policies except where the purpose of the average is to indicate changes in wage levels.

The average wage for an occupation was shown in Chart 1 by the broken horizontal line. It will be noticed that average hourly earnings for short-service men are considerably below, while the average for long and very long service men is considerably above the average for each occupation as a whole. For the men with moderately long service records the average may equal, exceed, or fall short of the average for the entire occupation. In no case does the average figure for the short-service men come within 5 cents of the average for the occupation, and usually the difference is between 9 and 12 cents. On the other hand, the average for the long and very long service men exceeds the average for all the men in the occupation by amounts varying from about 8 to 18 cents.

The same situation holds with weekly earnings, the average for the occupation being considerably above the average for the short-service men, below for the long and very long service group, and with no consistent relation to the average for the men with moderately long service records.

When the short-service men are excluded, as in yearly earnings, the average for the occupation is above the average for the moderately long service group in every instance except one and holds no consistent relation to the average for any group.

In short, the average wage for these occupations has no significance in connection with wage policies unless used merely to indicate changes in wage levels. Such an average is consistently too high for the general run of new employees, too low for the workers with long and very long service records, and holds no consistent relation to the average for the moderately long service group.

### Service Groups in Which Most of the Men are Found

Does it appear, in view of the fact that wages tend to vary directly with length of service except perhaps where length of service is very long, that the bulk of men have service records falling within the groups where wages are highest? The answer is an emphatic "No." Table 4 gives the percentage of men by length of service and by plants for each year. Considering all the plants, with a total of 652 men in 1925 and 1,086 in 1926, approximately 40 per cent each year had service records of less than one year and about 75 per cent had service records of less than five years in their respective plants. It appears, therefore, that a small proportion of the men are in the service groups with the highest wages.

When viewed from the standpoint of individual plants it will be seen that there is considerable variation among the plants as to the proportion of short-service employees. In some there are no men with less than one year of service; in others there are a few and in still others a large percentage have service records of less than one

year in both 1925 and 1926. In 1925, there were seven plants in which at least 27 per cent of the men had been in the employ of the company less than one year, while in 1926 there were eight plants in which this was true for over 20 per cent of the men. In one plant 51.7 and in another 73.7 per cent were in this group in 1926, although too much emphasis should not be placed on the latter. On the other hand, all the plants reporting, except plant No. 63 (in 1926), have some men with service records of 10 years and over, and in most of the plants there are some men with service of 20 years and over.

Even though there is variation among the plants as to the proportion of short-service men, in most cases the men in this service group constitute an appreciable proportion of the total. Thus in 1925 there were only four plants with less than 25 per cent of the men with service records of less than one year and in 3 plants the proportion is over 60 per cent. In 1926 there were five plants with less than 25 per cent and one plant with about 74 per cent. In nearly all plants the majority of the men have service records of less than 5 years.

TABLE 4.—PER CENT OF MEN HAVING EACH CLASSIFIED LENGTH OF SERVICE, BY PLANTS

1925

| Plant | Under 1 year | 1 year and under 5 years | 5 years and under 10 years | 10 years and under 15 years | 15 years and under 20 years | 20 years and over | Unknown | Total |
|---|---|---|---|---|---|---|---|---|
| No. 6 | 7.1 | 28.6 | 14.3 | 21.4 | 14.3 | 14.3 | ------- | 100 |
| No. 18 | 31.1 | 24.1 | ------- | 27.6 | 6.9 | 10.3 | ------- | 100 |
| No. 23 | 70.0 | 17.5 | 5.0 | 2.5 | ------- | 5.0 | ------- | 100 |
| No. 26 | 60.6 | 37.4 | 1.0 | 1.0 | ------- | ------- | ------- | 100 |
| No. 31 | ------- | 66.7 | 22.2 | 1.1 | ------- | ------- | ------- | 100 |
| No. 36 | 62.4 | 25.6 | 7.2 | 1.6 | 1.6 | .8 | 0.8 | 100 |
| No. 37 | ------- | 11.4 | 31.8 | 50.0 | ------- | 4.5 | 2.3 | 100 |
| No. 44 | 42.3 | 26.9 | 23.1 | 7.7 | ------- | ------- | ------- | 100 |
| No. 45 | 6.1 | 38.8 | 22.5 | 12.2 | 12.2 | 8.2 | ------- | 100 |
| No. 49 | 31.4 | 25.5 | 27.5 | 9.8 | 3.9 | 1.9 | ------- | 100 |
| No. 54 | 27.4 | 24.2 | 16.1 | 9.7 | 9.7 | 12.9 | ------- | 100 |
| Total | 43.9 | 29.3 | 11.0 | 8.9 | 3.1 | 3.5 | .3 | 100 |

1926

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| No. 6 | ------- | 30.8 | 7.7 | 30.8 | 15.3 | 15.4 | ------- | 100 |
| No. 18 | 34.0 | 36.2 | ------- | 17.0 | 4.3 | 6.4 | 2.1 | 100 |
| No. 23 | 51.7 | 24.1 | 13.8 | 3.5 | ------- | 6.9 | ------- | 100 |
| No. 26 | 34.8 | 55.0 | 8.0 | 2.2 | ------- | ------- | ------- | 100 |
| No. 31 | ------- | 63.6 | 18.2 | 18.2 | ------- | ------- | ------- | 100 |
| No. 36 | 33.6 | 49.5 | 8.4 | 3.8 | 1.9 | .9 | 1.9 | 100 |
| No. 37 | 2.3 | 9.1 | 18.2 | 61.4 | ------- | 4.5 | 4.5 | 100 |
| No. 44 | 37.5 | 29.2 | 25.0 | 8.3 | ------- | ------- | ------- | 100 |
| No. 45 | 10.4 | 22.9 | 33.4 | 14.6 | 8.3 | 8.3 | 2.1 | 100 |
| No. 49 | 44.9 | 26.9 | 19.2 | 5.1 | 1.3 | 2.6 | ------- | 100 |
| No. 52 | 19.4 | 35.9 | 35.4 | 4.2 | 3.0 | 2.1 | ------- | 100 |
| No. 54 | 23.6 | 21.6 | 23.5 | 13.7 | 9.8 | 7.8 | ------- | 100 |
| No. 63 | 73.7 | 26.3 | ------- | ------- | ------- | ------- | ------- | 100 |
| Total | 38.2 | 34.2 | 15.5 | 7.3 | 2.1 | 2.3 | .4 | 100 |

When viewed from the standpoint of occupations rather than plants it appears that short-service men dominate all the occupations and to about the same extent, as may be seen by Table 5. There is some indication that a larger proportion of turret-lathe and screw-machine operators fall in the short and moderately long service groups

than is the case in the other occupations. This may have a bearing on the fact that for the operators of these particular machine tools the average wage (hourly, weekly, and yearly) for the very long service men was consistently lower in both years than the average for the immediately preceding service group. The point of interest here is that the situation with regard to length of service is substantially the same whether viewed from the standpoint of plants or of occupations.

The fact that comparatively few of the men are in the service groups where wages are highest must not be interpreted as meaning that the men lose by not remaining longer at a particular plant. This may be the case, but not necessarily so. It is quite conceivable that workers in moving may increase their wages, even though they have relatively low wages in the plant they enter. Not until it is possible to know the gains and losses by interplant movement is it possible adequately to interpret the economic significance of the fact that, even though wages tend to vary with length of service, most of the workers are not found in those service groups with the highest wages.

TABLE 5.—PER CENT OF MEN HAVING EACH CLASSIFIED LENGTH OF SERVICE, BY OCCUPATIONS

1925

| Occupation | Under 1 year | 1 year and under 5 years | 5 years and under 10 years | 10 years and under 15 years | 15 years and under 20 years | 20 years and over | Unknown | Total |
|---|---|---|---|---|---|---|---|---|
| Operation of— | | | | | | | | |
| Drill press | 35.5 | 23.7 | 18.4 | 15.8 | 4.0 | 2.6 | ..... | 100 |
| Milling machine | 33.8 | 28.2 | 14.1 | 14.1 | 5.6 | 4.2 | ..... | 100 |
| Turret lathe and screw machine | 47.8 | 34.2 | 7.6 | 7.1 | .6 | 2.1 | 0.6 | 100 |
| Engine lathe | 36.5 | 29.3 | 12.0 | 10.6 | 5.3 | 6.3 | ..... | 100 |
| Total | 39.9 | 30.1 | 11.7 | 10.6 | 3.5 | 4.1 | .1 | 100 |
| Special [1] | 62.8 | 25.7 | 7.9 | .9 | .9 | .9 | .9 | 100 |
| Grand total | 43.9 | 29.3 | 11.0 | 8.9 | 3.1 | 3.5 | .3 | 100 |

1926

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Operation of— | | | | | | | | |
| Drill press | 50.0 | 28.3 | 14.1 | 5.6 | 1.2 | 0.8 | ..... | 100 |
| Milling machine | 37.4 | 37.4 | 15.5 | 6.3 | 2.4 | 1.0 | ..... | 100 |
| Turret lathe and screw machine | 40.3 | 35.6 | 13.7 | 7.2 | .7 | 1.4 | 1.1 | 100 |
| Engine lathe | 27.3 | 30.6 | 20.3 | 10.7 | 4.4 | 5.9 | .8 | 100 |
| Total | 38.6 | 32.8 | 16.0 | 7.5 | 2.2 | 2.4 | .5 | 100 |
| Special [1] | 32.5 | 50.6 | 9.7 | 3.6 | 1.2 | 1.2 | 1.2 | 100 |
| Grand total | 38.1 | 34.2 | 15.5 | 7.3 | 2.1 | 2.3 | .5 | 100 |

[1] All men in firm No. 36 who could not be classified under any one of the other occupations because the men regularly operated several machines as the nature of the work required.

## Conclusions

IF GROUP experience is to have any meaning in the construction and execution of sound wage policies, it is necessary that data be collected and analyzed on such bases as make possible important comparisons. From the foregoing analysis it appears that length of

service is an important factor in relation to wages in these occupations, and wherever this relation exists length of service can not be wisely disregarded. The analysis here shows that the average for all workers in an occupation is too high as an indicator of the prevailing wage for short-service men and too low for the more stable part of the working force, while it may or may not be representative of the moderately long service employees. It appears, therefore, that for at least some purposes there is not a single market wage, but several. It may be that an improper use of an average wage may be related to the fact that, even though wages tend to vary directly with length of service, the bulk of the men have comparatively short-service records in the plants from which they were reported, and it may be that the idea of a single market or average wage for an occupation has so dominated the thinking of those in charge of wage policies that adequate allowances have not been made for length of service in the use of such an average in connection with wage policies.

Whether length of service is a fundamental influence itself or is merely symptomatic of other influences is an open question. Conceivably the work performed by men in different service groups is similar in name rather than in essence. Whatever the actual situation may be, the fact remains that it would be difficult at the present time to find more closely defined and more homogeneous occupations than those selected for this analysis. Until further information is available on this and other points there is reason to question whether or not for some purposes there is a single market wage for an occupation. Apparently length of service is a factor which must be taken into account in the use of market information concerning wages.

## History of Association of Governmental Officials in Industry [1]

By Louise E. Schutz, Secretary-Treasurer

THE first printed record in the office of the Association of Governmental Officials in Industry of the United States and Canada regarding the activities of the association, known for years as the Association of Governmental Labor Officials, is a bulletin published by the United States Department of Labor, primarily to give an account of the fifth annual convention of the association held in Des Moines, Iowa, in 1918. This bulletin contains as an appendix a brief account of an informal meeting, by courtesy called the fourth convention of the Association of Governmental Labor Officials of the United States and Canada, held in Asheville, N. C., in September, 1917, to which nine States and one Province sent representatives, as follows: Arkansas, Connecticut, Iowa, Kansas, Massachusetts, Michigan, New Hampshire, North Carolina, Pennsylvania, and Quebec. This convention was the by-product of a conference of labor commissioners and other members of labor departments called by Secretary of Labor Wilson, July, 1917, to confer on the problem of child labor in the United States.

Due to the fact that most of the officers who had been elected in 1916 were men whose terms of office had expired and who had not

[1] An address delivered at the sixteenth annual convention of the association, held at Toronto, Canada, June 5-7, 1929.

been reappointed, it seemed likely that there would be no convention in 1917. However, Miss Bresette, of Kansas, was asked to start correspondence with State labor departments with a view to a convention. She did so, and as a result the fourth annual convention of the Association of Governmental Labor Officials of the United States and Canada was held at Asheville in September, 1917. I believe that Mr. John S. B. Davie, commissioner of labor of New Hampshire, and Mr. A. L. Urick, of Iowa, are the only persons in attendance at the present convention who attended that informal convention held in 1917.

There are several items in the report of the fifth annual convention in which I believe the members and friends of the organization here to-day will be interested. The first pages of the report contain a history of the association prepared by Linna E. Bresette, who acted as secretary-treasurer of the association for five years. In this report she states that she finds from reference to old files (which by the way are not now in our possession) that the Association of Governmental Labor Officials of the United States and Canada resulted from an amalgamation of two organizations, one called "Chiefs of the Bureaus of Labor Statistics," organized in 1883, and the other the "Association of Factory Inspectors," organized in 1887.

In 1883, 46 years ago, the labor commissioners of six States, Massachusetts, New Jersey, Pennsylvania, Ohio, Illinois, and Missouri, met and organized the "Association of Chiefs of the Bureaus of Labor Statistics." The purpose of that organization, to quote at random from the opening address at the first convention, was "To secure information in all departments of labor in its relations to the commercial, social, industrial, educational, and sanitary conditions of the laboring classes. * * * The best methods of obtaining and systematizing are to be devised, discussed, and formulated. * * *. It is not the duty of the labor commissioner to attempt an adjustment of the relation of the laboring and manufacturing classes with the capital of the country. It is his office to furnish such reliable statistics and data to the law-making power as will furnish the basis of an intelligent comprehension of the complex features of this great problem. * * * The establishment of a safe and proper equilibrium between the great forces of this country—labor and capital—is of vital import, and is worthy the best efforts of the statesmen, to the end that such laws shall be enacted as shall relieve labor of unjust burdens and encourage capital in the development of other avenues for the profitable employment of labor." The Commissioner of Labor of the Federal department at Washington held the position of president of the association for 20 years.

The first meeting of factory inspectors occurred in Philadelphia in June, 1887—42 years ago—through the efforts of the chief inspector of Ohio, who corresponded with other chief inspectors in the country and brought about this meeting at Philadelphia, which was attended by factory inspectors from three States, Massachusetts, New Jersey, and Ohio, and a representative of the State Board of Education of Connecticut. In the opening address delivered at the first meeting of factory inspectors a statement was made to the effect that "the purpose of this organization is to take counsel one of another as to the best means of accomplishing the object for which the office of

factory inspector was created." Mr. Dorn, of Ohio, in this opening address, mentioned the fact that the office of factory inspector is of comparatively recent origin, and that because of the limited knowledge of its designs people must be made acquainted with the importance of the necessity of thorough inspection before factory inspectors can expect to succeed in their undertaking. Mr. Dorn made the following observation, which again I quote somewhat at random: "Make our workshops and factories comfortable and healthy and secure those employed therein against the accidents that are now a daily occurrence, and one great source of discontent and consequent strikes will be removed. The greater the interest the employee takes in his work, the greater the profit of the employer. The fact has been established that the workman cares for his employer just in proportion as the employer cares for his workman. Good and humane treatment on the part of capital should receive a proper and profitable reward from labor. It is a paying investment. On us devolves the important duty of ascertaining whether children under a certain age are employed in workshops and factories. Our business requires of us the careful examination of all kinds of structures and all kinds of machinery and mechanical appliances. Opposition to inspection is fast disappearing. We are welcomed or not, just in proportion to the manufacturer's knowledge of our purposes and the results effected by our examinations. It would perhaps be well if we could have more uniformity both as to the laws and the manner of carrying them out in the different States. We are here for the purpose of comparing notes, and of each one availing himself of the experience and suggestions of others. * * * We are endeavoring to restore the child to the schoolroom. * * * We are endeavoring to protect the working people of the country in life, health, and limb, that they may be able to rear their children in such manner that they shall become intelligent and healthy men and women, the possessors of sound minds, of good morals, and of unbroken constitution."

It is of interest to note that the aims and purposes which were enunciated at the first convention of the two organizations, later amalgamated into the one to which we now belong, have been reiterated at every succeeding convention. The two organizations maintained their separate entity for a number of years, until at a meeting of factory inspectors at Toronto, Canada, in 1908, a committee was appointed with a view to bringing about amalgamation of the two organizations. How history repeats itself! Difficulty had been met in securing appropriations to defray the expenses of delegates attending the conventions. The solution seemed to be amalgamation, which would mean one convention to attend, rather than two. Through the ingenuity of a few members of each organization, both held their meetings in Rochester in 1909. Some sort of arrangement was effected, and the two organizations met as one at the county courthouse at Hendersonville, N. C., in 1910. At that time a reslution was adopted at the meeting of factory inspectors in which the statement was made that since the purposes, aims and objects, and scope of work of the factory inspectors and commissioners of labor statistics were identical, a committee should be appointed to confer with a like committee of commissioners looking to the merging of the two associations under an appropriate name and workable consti-

tution. The factory inspectors, however, were not ready to amalgamate, as they feared that their identity might be lost if the two associations were merged.

### Formation of Present Association

FINALLY, in 1914, this opposition was overcome. The two associations were merged under the name "Association of Governmental Labor Officials of the United States and Canada" at Nashville, Tenn., June, 1914, at which time a constitution was adopted. The constitution stated that the purpose of the new association should be the promotion of the welfare of industrial workers, the securing of uniform labor legislation, better laws for factory inspection, laws creating State employment bureaus, laws promoting industrial hygiene and accident prevention, and to aid in every way possible to secure better provision for the industrial development and protection of the workers of the various States and Provinces. Membership in the organization was restricted to employees in Federal, State, provincial, county, or municipal departments having to do with the enforcement and supervision of labor laws. Other than the fact of amalgamation and statements of officers elected and place of meeting each year given in the printed proceedings there is no printed record of what occurred at the first, second, and third conventions of the Association of Governmental Labor Officials of the United States and Canada.

At the convention held in Des Moines, Iowa, in 1918, the Federal Government at Washington was represented by Mr. Ethelbert Stewart, who was delegated to attend by the Secretary of Labor. Miss Bressette's observation in this connection is as follows: "His presence at once added zest to the meeting and restored the spirit of cooperation between the Federal department and the departments of the various States." As a result of the attendance of Mr. Stewart at the convention at Des Moines in 1918 a very great benefit accrued to the Association of Governmental Labor Officials of the United States and Canada in that the United States Department of Labor undertook to print the proceedings of the conventions. Mr. Stewart's observation, as stated in his letter of transmittal to the head of the Department of Labor at Washington, is worthy of mention at this time. Again I quote: "Convinced that this association, composed as it is of the labor officials and factory inspectors of the various States, is one with which the Department of Labor could most effectively work and of which it should, so far as the law permits, be a member, I have the honor to transmit herewith a copy of the proceedings of the fifth annual convention of the Association of Governmental Labor Officials of the United States and Canada, together with the papers and reports submitted to that convention."

The report of the auditing committee of the fourth convention stated that at that time the association had liabilities which exceeded its assets in the amount of $14.87. In other words, the association was insolvent. In the treasurer's report, which Miss Bresette submitted in 1918, a statement was made that the treasurer had on hand then, at the time of the convention, $61.04, but that the association had outstanding debts contracted by the former secretary, which amounted to $263.68, to cover printing costs, stenographic service, etc. These debts were never paid. My purpose in mentioning

these facts at this time is to indicate what a boon it was to the association to have the Federal Department of Labor undertake to print the proceedings of the succeeding conventions. It is because of this generous arrangement that the association has been able to keep solvent since 1918.

## State Representation at Meetings

IN PREPARATION for this paper, I have read over the reports of the proceedings of the various conventions beginning with the fourth and extending through the fifteenth. I have been interested to note that Quebec was apparently the first Province to affiliate itself with the association. Since that time Alberta, British Columbia, Manitoba, and Saskatchewan have sent representatives to the various conventions, though not so continuously as has Ontario. The Federal Department of Labor of Canada affiliated with the organization in 1923, through the attendance of the secretary at the Richmond convention. It has maintained membership ever since and has sent representatives from the employment service and the labor intelligence branch to conventions. The Children's Bureau, the Women's Bureau, and the Employment Service of the United States Department of Labor affiliated with the organization as they were established. The Bureau of Mines was made an honorary member in 1927. Although none of these bureaus pay dues to the association, the expense of printing the proceedings, borne by the Department of Labor, far exceeds any liability any of these bureaus might otherwise have in the matter of dues. Furthermore, they are prohibited by law from paying dues. The records have not always been clear each year as to what States paid dues, but the following States and Provinces, which have sent representatives at some time to the conventions, are not represented this year: Alaska, Arizona, California, Connecticut, Delaware, Indiana, Kansas, Michigan, North Carolina, North Dakota, Oklahoma, Oregon, Rhode Island, South Carolina, South Dakota, Texas, Utah, Virginia, Washington, Wyoming, and Quebec.

The question immediately arises, Why is it, when a State has once sent representatives, that it does not continue to do so? In some instances, as revealed by letters read at the business session Wednesday morning, the State will pay neither the expenses of attendance of a delegate nor dues to the association. In some instances the new commissioners have not become interested, and so it goes. This year although a very special effort was put forth to enlist membership and attendance at the convention by the Secretary of Labor, Hon. James J. Davis, by Doctor McBride, who resigned as president of the organization in March, and by the secretary-treasurer, only 26 departments paid dues, as against 28 in 1926. There are representatives in attendance from 13 States and 4 Provinces, and from various bureaus of 2 Federal departments—the Bureau of Labor Statistics, the Women's Bureau, and the Children's Bureau, of the United States Department of Labor, and the intelligence bureau and the employment bureau of the Canadian Department of Labor. Altogether 22 bureaus are represented this year.

It is interesting to note that the year of largest attendance was 1924, when the convention was held at Chicago; at that meeting representatives of 34 departments registered. The Association of

Public Employment Services met at the same time and place, and thus helped to augment the attendance at both conventions. In 1925, at Salt Lake City, representatives of 24 departments registered for the convention of the Association of Governmental Labor Officials; that year the International Association of Industrial Accident Boards and Commissions met immediately after our convention. Twenty-four departments participated in the convention at Harrisburg in 1922, 23 at Richmond in 1923, and 19 at Columbus, Ohio, in 1926.

A perusal of the reports indicates that in some instances States and Provinces which have sent representatives to the meetings, who have reported on new legislation, taken part in discussions, etc., have not paid dues. The association has apparently been interested primarily in participation of many representatives in the meetings regardless of whether or not the persons in attendance found it possible actively to affiliate with the organization by paying dues. In some years we have had reports on new legislation from as many as 19 States. Last year we had such reports from but three States. Although we had a small convention at New Orleans, it was one that was very much worth while.

At the New Orleans convention, in 1928, the name of the association was changed by constitutional amendment from Association of Governmental Labor Officials to Association of Governmental Officials in Industry. The change was made for the purpose of removing a misunderstanding that then existed regarding the nature of the association and for the purpose of assisting in securing the cooperation and support of such organizations as chambers of commerce and other employers' associations. It was also felt that this change in name more aptly defined the status of the personnel of the members of the organizations.

## Subjects Discussed

IN LOOKING over the proceedings of the last 13 conventions, I have noticed with interest the subjects which have been given consideration, i. e., industrial hygiene, industrial fatigue, factory inspection, accidents and accident prevention, occupational diseases, industrial rehabilitation, mine safety work, migratory children, minimum-wage legislation, conciliation in labor disputes, and how to make statistics uniform. Our organization has had participation in the formulation of a number of safety codes, notably those concerning which we had reports at the business session Wednesday morning. It has had the privilege of participating in the work of the National Association of Legal Aid Organizations in its attempts to work out a satisfactory and uniform law for the collection of wage claims. The organization had a representative at the industrial accident prevention conference, called by Secretary of Labor Davis, in Washington in July, 1926. We admitted to membership, by changing the constitution in 1925, the Washington representative of the International Labor Office.

## Questions for Consideration

IN CONCLUSION, I wish again to consider some of the questions which have been issues in the past, and which are not yet dead.

1. Would it be advisable for this organization to amalgamate with some other? My own connection with the organization leads me to

believe that if this organization amalgamated with some other for the purpose of securing a larger attendance at the conventions, we would not accomplish the purpose that might be intended. It is my belief that for the most part we would still have only one representative from a State in attendance at the convention; for example, four people from Minnesota now attend the two conventions of the A. G. O. I. and the I. A. I. A. B. C. Were the two amalgamated, I have reason to believe that but two people would be permitted to attend the one convention, and that the situation which we meet in Minnesota would be duplicated elsewhere. In other words, I doubt that amalgamation would increase our attendance.

2. How may we augment our treasury? If we had more money in the treasury, the expenses of the executive board might be paid to a meeting which I believe should be held some months prior to the convention, in order that complete plans might be laid by the board (which is the program committee) for the next convention. Tentative programs could be sent out early to enlist interest, and we might then hope to know definitely, before the final programs are printed just who are coming to take part in the program and who are not. In my opinion, the organization is of such value that a greater amount of time and thought should be given to the making of the programs than seems possible now, when it is arranged each year largely through correspondence between the members of the executive board.

3. Would it not be advisable to elect to office persons whose terms of office do not expire the year of the convention? The executive board did not begin to work definitely on the program this year until after the resignation of Doctor McBride, which was held in abeyance for some time and did not finally go into effect until March.

4. In any event, is it not advisable to begin making plans for the convention six or seven months before it is to be held? Last year, although every effort was made by the secretary-treasurer to bring about concerted action on the program at an early date, the executive board did not begin to arrange the program until after March 15, and the convention was held in May. Such an arrangement places entirely too much responsibility on the secretary, who is sometimes compelled to fill in gaps and make last-minute decisions without the sanction of the executive board, which constitutes the program committee.

5. How may we secure more members who will affiliate with the organization and keep membership in it over a period of years? If that problem could be solved, the problem of an adequate budget would automatically be solved. Although a full coffer is not our primary consideration, certainly any organization which hopes to be effective ought to be able to meet legitimate expenses without embarrassment.

May I say, again in conclusion, that it has been gratifying to me to note from my vantage point of secretary-treasurer, that people of national prominence, not members of the organization, have expressed themselves as feeling it a privilege to be invited to address the organization? I have attended conventions of this association every year since 1918. During the years of association with the organization I have heard many expressions of opinion to the effect that the conventions are of lasting benefit and inspiration to all who attend.

## Accident Experience of the Iron and Steel Industry in 1928

SINCE 1913 the Bureau of Labor Statistics has published from year to year accident rates for a group of plants which were among the first to give serious attention to the accident-prevention problem. This group includes plants manufacturing fabricated products, sheets, wire and its products, and tubes, and two groups manufacturing miscellaneous steel products. The present article presents the rates for 1928 for this group and also the accident rates for the industry as a whole.[1]

From 1913 to 1927 the accident rates of the selected group have shown a steady and considerable change for the better. It is therefore a matter of some surprise that, of the six units forming the group, all but two (those manufacturing tubes and the second group of those manufacturing miscellaneous steel products), show rising frequency rates from 1927 to 1928. The increases are probably not of very great significance, since they are very small. It is possible that these plants have reached a norm and that subsequent rates will vary about this point.

Analysis of the data for this group of plants, by causes of accidents, reveals no great increases or decreases in accidents due to any particular cause. On the contrary, it is seen that the decline in rates from year to year has been spread with remarkable evenness over the whole group of causes.

In the industry as a whole, the year 1928 shows a decline in both frequency and severity rates as compared with the 3-year period 1925–1927. Structural-steel erection not only continued to have the highest rates of all the departments in the industry covered but shows an increase in severity rates in 1928 as compared to 1925–1927.

### Statistics for Selected Group of Plants

*Frequency rates by years.*—Table 1, which follows, shows the frequency rates for the plants in the selected group manufacturing each specified product, for each year since 1913. The increase in rates in 1928 has already been pointed out.

TABLE 1.—ACCIDENT FREQUENCY RATES (PER 1,000,000 HOURS' EXPOSURE) FOR A SELECTED GROUP OF IRON AND STEEL PLANTS, 1913 TO 1928, BY PRODUCT AND YEAR

| Year | Fabricated products | Sheets | Wire and its products | Tubes | Miscellaneous steel products | | Total |
|---|---|---|---|---|---|---|---|
| | | | | | Group A | Group B | |
| 1913 | 100.3 | 61.6 | 59.3 | 27.2 | 70.9 | 41.3 | 60.3 |
| 1914 | 59.0 | 47.2 | 46.2 | 12.5 | 50.7 | 27.6 | 43.5 |
| 1915 | 53.5 | 37.3 | 52.4 | 10.8 | 51.9 | 23.0 | 41.5 |
| 1916 | 52.1 | 34.0 | 48.2 | 12.4 | 67.6 | 28.2 | 44.4 |
| 1917 | 51.3 | 33.9 | 32.5 | 10.2 | 51.3 | 20.5 | 34.5 |
| 1918 | 38.2 | 25.9 | 18.8 | 9.1 | 42.0 | 31.4 | 28.8 |
| 1919 | 32.8 | 25.8 | 12.5 | 9.1 | 39.7 | 23.0 | 26.1 |
| 1920 | 35.3 | 22.7 | 12.0 | 8.9 | 35.3 | 18.6 | 22.9 |
| 1921 | 28.4 | 17.5 | 7.5 | 6.1 | 15.8 | 12.1 | 13.2 |
| 1922 | 33.8 | 16.9 | 7.9 | 7.1 | 14.5 | 10.8 | 13.0 |
| 1923 | 32.6 | 17.2 | 7.9 | 7.0 | 13.9 | 9.8 | 12.7 |
| 1924 | 33.4 | 10.3 | 6.2 | 5.1 | 11.8 | 7.9 | 10.2 |
| 1925 | 27.4 | 11.4 | 4.2 | 4.0 | 9.8 | 3.7 | 8.2 |
| 1926 | 24.3 | 9.4 | 3.9 | 3.6 | 6.6 | 3.8 | 6.8 |
| 1927 | 18.0 | 8.4 | 3.5 | 2.5 | 5.1 | 2.7 | 5.3 |
| 1928 | 19.7 | 8.7 | 4.0 | 2.3 | 5.3 | 2.4 | 5.6 |

[1] Detailed data on accidents in the iron and steel industry will be found in Bul. No. 490 of this bureau.

*Accident rates by causes.*—The data just presented may be considered from another viewpoint. It might happen that a declining general rate would be made up of component rates, some of which were falling very rapidly, whereas others were stationary or were rising. To test this possibility, rates were computed for the various causes operative in these plants. Inspection of the result (Table 2) shows that whatever influence has been at work to bring about the remarkable decline in the rates has been distributed with surprising uniformity over the entire group.

There is a quite general impression that the safeguarding of machinery has reached such development that it has become of secondary importance. Table 2 does not entirely support this conclusion: The rates for machinery have declined notably, but not very much more rapidly than those for other causes. A reasonable amount of attention to machine hazards is evidently still necessary.

TABLE 2.—ACCIDENT FREQUENCY RATES (PER 1,000,000 HOURS' EXPOSURE) FOR A SELECTED GROUP OF STEEL PLANTS, 1913 TO 1928, BY YEAR AND CAUSE

| Cause | 1913 | 1914 | 1915 | 1916 | 1917 | 1918 | 1919 | 1920 | 1921 | 1922 | 1923 | 1924 | 1925 | 1926 | 1927 | 1928 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Machinery | 7.3 | 5.0 | 4.9 | 5.4 | 4.5 | 4.0 | 3.3 | 3.4 | 1.8 | 2.2 | 2.3 | 2.0 | 1.6 | 1.5 | 1.3 | 1.4 |
| Working machines | 3.8 | 2.7 | 2.6 | 2.6 | 2.0 | 1.8 | 1.4 | 1.5 | .8 | 1.1 | 1.0 | .8 | .7 | .7 | .5 | .6 |
| Caught in | 2.5 | 1.8 | 1.7 | 1.7 | 1.2 | 1.1 | .9 | 1.0 | .6 | .8 | .7 | .6 | .5 | .5 | .4 | .4 |
| Breakage | .1 | .1 | .1 | .1 | .1 | .1 | .1 | .1 | .1 | .1 | (1) | (1) | (1) | (1) | (1) | (1) |
| Moving material in | 1.2 | .8 | .8 | .8 | .7 | .6 | .4 | .4 | .1 | .3 | .2 | .2 | .2 | .2 | .1 | .2 |
| Cranes, etc | 3.5 | 2.3 | 2.3 | 2.8 | 2.5 | 2.2 | 1.9 | 1.9 | 1.0 | 1.2 | 1.3 | 1.2 | .9 | .9 | .8 | .8 |
| Overhead | 2.8 | 1.9 | 2.0 | 2.5 | 2.2 | 1.9 | 1.6 | 1.5 | .8 | 1.0 | 1.1 | .9 | .7 | .7 | .6 | .6 |
| Locomotive | .3 | .2 | .2 | .2 | .2 | .2 | .2 | .2 | .2 | .1 | .1 | .1 | .1 | .1 | .1 | .1 |
| Other hoisting apparatus | .4 | .2 | .1 | .1 | .1 | .1 | .1 | .2 | .1 | .1 | .1 | .1 | .1 | .1 | .1 | .1 |
| Vehicles | 2.3 | 1.9 | 1.6 | 1.7 | 1.7 | 1.3 | 1.2 | .1 | .5 | .4 | .6 | .5 | .3 | .3 | .2 | .2 |
| Hot substances | 5.4 | 3.6 | 3.7 | 4.5 | 3.6 | 3.0 | 2.8 | 2.5 | 1.2 | 1.1 | 1.2 | .9 | .6 | .5 | .4 | .4 |
| Electricity | .5 | .4 | .2 | .4 | .3 | .3 | .2 | .3 | .1 | .1 | (1) | (1) | (1) | .1 | (1) | (1) |
| Hot metal | 3.6 | 2.1 | 2.3 | 3.0 | 2.5 | 2.1 | 2.0 | 1.8 | .8 | .7 | .9 | .6 | .4 | .4 | .3 | .2 |
| Hot water, etc | 1.3 | 1.1 | 1.2 | 1.1 | .8 | .6 | .6 | .4 | .2 | .3 | .2 | .2 | .1 | .1 | .1 | .1 |
| Falls of persons | 4.5 | 4.1 | 3.5 | 3.7 | 3.2 | 2.8 | 2.8 | 2.5 | 1.7 | 1.5 | 1.4 | 1.4 | 1.1 | 1.0 | .7 | .7 |
| From ladders | .3 | .1 | .1 | .1 | .1 | .2 | .1 | .1 | .1 | .1 | .1 | .1 | (1) | .1 | (1) | (1) |
| From scaffolds | .2 | .2 | .2 | .2 | .3 | .2 | .2 | .2 | .1 | .2 | .1 | .1 | .1 | .1 | .1 | (1) |
| Into openings | .2 | .1 | .1 | .3 | .2 | .1 | .1 | .1 | .1 | (1) | (1) | (1) | (1) | (1) | (1) | (1) |
| Due to insecure footing | 3.8 | 3.7 | 3.1 | 3.1 | 2.6 | 2.3 | 2.3 | 2.1 | 1.4 | 1.3 | 1.1 | 1.1 | .9 | .8 | .6 | .6 |
| Falling material not otherwise specified | 1.2 | .7 | .7 | .6 | .4 | .3 | .4 | ----- | .1 | .1 | .1 | .1 | .1 | .1 | (1) | .1 |
| Handling objects and tools | 26.7 | 19.4 | 20.6 | 21.5 | 15.7 | 12.8 | 11.7 | 10.4 | 6.5 | 5.8 | 5.5 | 3.9 | 3.4 | 2.9 | 2.0 | 2.3 |
| Objects dropped in handling | 11.2 | 7.3 | 7.6 | 8.4 | 6.1 | 5.5 | 5.0 | 4.4 | 2.6 | 2.6 | 2.3 | 1.9 | 1.5 | 1.2 | .9 | .9 |
| Caught between two objects | 3.4 | 2.6 | 2.6 | 3.1 | 2.1 | 1.7 | 1.7 | 1.3 | .7 | .7 | .7 | .5 | .4 | .3 | .2 | .3 |
| Trucks | 1.9 | 1.0 | 1.4 | 1.4 | 1.2 | .9 | .7 | .6 | .5 | .4 | .4 | .2 | .2 | .2 | .1 | .1 |
| Lifting | 2.5 | 2.3 | 2.5 | 2.5 | 2.0 | 1.4 | 1.4 | 1.1 | .8 | .8 | .5 | .3 | .3 | .3 | .2 | .2 |
| Objects flying from tools | .2 | .2 | .1 | .1 | .1 | .1 | .1 | .1 | .1 | .1 | .1 | (1) | (1) | (1) | (1) | (1) |
| Sharp points and edges | 3.8 | 3.4 | 3.8 | 3.1 | 2.2 | 1.5 | 1.3 | 1.5 | 1.1 | .6 | .6 | .3 | .4 | .4 | .3 | .4 |
| Tools | 3.7 | 2.6 | 2.6 | 2.9 | 2.0 | 1.7 | 1.4 | 1.4 | .8 | .7 | .8 | .6 | .5 | .5 | .3 | .3 |
| Miscellaneous | 12.9 | 8.8 | 6.5 | 7.0 | 5.4 | 4.6 | 4.1 | 3.1 | 1.3 | 1.9 | 1.8 | 1.6 | 1.1 | .4 | .6 | .7 |
| Asphyxiating gas | .3 | .2 | .1 | .1 | .1 | .1 | .2 | .1 | .5 | (1) | .1 | (1) | (1) | (1) | (1) | (1) |
| Flying object not striking eye | .8 | .6 | .6 | .5 | .4 | .5 | .3 | .3 | .2 | .1 | .3 | .2 | .1 | .1 | .1 | .1 |
| Flying object striking eye | 2.9 | 2.1 | 1.7 | 1.9 | 1.6 | 1.6 | 1.3 | 1.1 | .5 | .4 | .2 | .3 | .2 | .1 | .1 | .1 |
| Heat | .9 | .8 | .4 | .4 | .1 | .2 | .1 | .1 | .1 | .1 | (1) | .1 | (1) | (1) | (1) | (1) |
| Other causes | 8.0 | 5.1 | 3.7 | 4.1 | 3.2 | 2.2 | 2.2 | 1.5 | .6 | 1.3 | 1.1 | 1.0 | .8 | .2 | .3 | .4 |
| Total | 60.3 | 43.5 | 41.5 | 44.4 | 34.5 | 28.8 | 26.3 | 22.9 | 13.3 | 13.0 | 12.8 | 10.2 | 8.2 | 6.8 | 5.3 | 5.6 |

[1] Less than one-fourth of one.

## Statistics of the Industry as a Whole

In Table 3 the year 1928 is compared with the 5-year periods 1910–1914, 1915–1919, and 1920–1924, and the 3-year period 1925–1927. Between the 3-year period and 1928 there is a very uniform decline of the rates for both frequency and severity. In the industry as a whole the frequency rate declined from 24.5 for the 3-year period to 19.7 in 1928, while the severity rate declined from 2.5 to 2.2. This change is not very large, but since a similar change is found in nearly all the departments it is safe to conclude that progress in the iron and steel industry has not yet reached its limit.

In a number of previous reports it has been necessary to call attention to the fact that the foundries were not succeeding in making as good a record as the other branches of the industry. It is accordingly gratifying to record a very substantial improvement in the foundry figures. In the 3-year period foundries had a frequency rate of 60.1 and a severity rate of 3.2. In 1928 the figures were 45.9 and 1.8, respectively. These rates are still high as compared with many of the other departments, but the improvement is encouraging.

The erection of structural steel continues at the highest point of any one of the departments. For the 3-year period its frequency rate was 72.2 and its severity rate 21.4. In 1928 the figures were 61.8 and 27.6, respectively. The increase in the severity rate in 1928 is disappointing but it must be remembered that this occupation is beyond question one of very serious intrinsic hazard.

Table 3.—ACCIDENTS AND ACCIDENT RATES IN THE IRON AND STEEL INDUSTRY, 1910 TO 1928, BY DEPARTMENT, YEAR, AND PERIOD

*The industry*

| Year or period | Full-year workers | Number of cases | | | | Frequency rates (per 1,000,000 hours' exposure) | | | | Severity rates (per 1,000 hours' exposure) | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Death | Permanent disability | Temporary disability | Total | Death | Permanent disability | Temporary disability | Total | Death | Permanent disability | Temporary disability | Total |
| 1910–1914 | 1,310,911 | 1,524 | 5,080 | 226,305 | 232,954 | 0.4 | 1.3 | 57.5 | 59.2 | 2.3 | 1.1 | 0.7 | 4.1 |
| 1915–1919 | 1,545,706 | 1,731 | 4,469 | 186,532 | 192,732 | .4 | 1.0 | 40.2 | 41.6 | 2.2 | .8 | .6 | 3.6 |
| 1920–1924 | 1,839,818 | 1,345 | 4,810 | 179,128 | 185,277 | .2 | .9 | 32.5 | 33.6 | 1.5 | .8 | .5 | 2.8 |
| 1925–1927 | 1,275,126 | 844 | 3,326 | 89,884 | 94,054 | .2 | .9 | 23.4 | 24.5 | 1.3 | .8 | .4 | 2.5 |
| 1928 | 418,163 | 229 | 993 | 23,434 | 24,656 | .2 | .8 | 18.7 | 19.7 | 1.1 | .8 | .4 | 2.2 |
| *Blast furnaces* | | | | | | | | | | | | | |
| 1910–1914 | 126,582 | 324 | 366 | 22,578 | 23,268 | 0.9 | 1.0 | 60.4 | 62.3 | 5.2 | 1.0 | 0.8 | 7.0 |
| 1915–1919 | 136,166 | 317 | 312 | 15,287 | 15,916 | .8 | .8 | 37.4 | 39.0 | 4.7 | .9 | .5 | 6.1 |
| 1920–1924 | 123,854 | 211 | 251 | 10,910 | 11,372 | .6 | .7 | 29.4 | 30.7 | 3.4 | .7 | .5 | 4.5 |
| 1925–1927 | 74,582 | 121 | 172 | 5,159 | 5,452 | .5 | .8 | 23.1 | 24.4 | 3.2 | .8 | .3 | 4.3 |
| 1928 | 21,697 | 23 | 47 | 1,314 | 1,384 | .4 | .7 | 20.2 | 21.3 | 2.1 | .9 | .4 | 3.3 |
| *Bessemer converters* | | | | | | | | | | | | | |
| 1910–1914 | 28,101 | 57 | 146 | 7,367 | 7,570 | 0.7 | 1.7 | 87.4 | 89.8 | 4.0 | 1.1 | 1.3 | 6.4 |
| 1915–1919 | 25,645 | 62 | 112 | 4,262 | 4,436 | .8 | 1.5 | 55.4 | 57.7 | 4.8 | 1.1 | 1.0 | 6.9 |
| 1920–1924 | 26,147 | 24 | 53 | 1,876 | 1,953 | .3 | .7 | 23.9 | 24.9 | 1.8 | .4 | .4 | 2.6 |
| 1925–1927 | 13,704 | 19 | 36 | 371 | 426 | .5 | .9 | 9.0 | 10.4 | 2.8 | 1.8 | .3 | 4.9 |
| 1928 | 3,803 | 3 | 5 | 81 | 89 | .3 | .4 | 7.1 | 7.8 | 1.6 | .2 | .3 | 2.0 |

TABLE 3.—ACCIDENTS AND ACCIDENT RATES IN THE IRON AND STEEL INDUSTRY, 1910 TO 1928, BY DEPARTMENT, YEAR, AND PERIOD—Continued

*Open-hearth furnaces*

| Year or period | Full-year workers | Number of cases | | | | Frequency rates (per 1,000,000 hours' exposure) | | | | Severity rates (per 1,000 hours' exposure) | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Death | Permanent disability | Temporary disability | Total | Death | Permanent disability | Temporary disability | Total | Death | Permanent disability | Temporary disability | Total |
| 1910-1914 | 71,293 | 143 | 333 | 15,809 | 16,285 | 0.7 | 1.5 | 72.8 | 75.0 | 4.0 | 1.6 | 1.0 | 6.6 |
| 1915-1919 | 86,175 | 191 | 317 | 12,563 | 13,071 | .7 | 1.2 | 48.6 | 50.5 | 4.4 | 1.2 | .9 | 6.5 |
| 1920-1924 | 107,820 | 148 | 278 | 10,191 | 10,617 | .5 | .9 | 31.5 | 32.9 | 2.7 | .9 | .6 | 4.2 |
| 1925-1927 | 64,707 | 100 | 200 | 3,999 | 4,299 | .5 | 1.0 | 20.6 | 22.1 | 3.1 | 1.2 | .4 | 4.7 |
| 1928 | 23,083 | 24 | 64 | 968 | 1,056 | .4 | .9 | 14.0 | 15.3 | 2.1 | 1.1 | .3 | 3.4 |
| *Foundries* | | | | | | | | | | | | | |
| 1910-1924 | 95,917 | 84 | 449 | 17,765 | 18,298 | 0.3 | 1.6 | 61.7 | 63.6 | 1.8 | 1.1 | 0.7 | 3.6 |
| 1915-1919 | 92,746 | 84 | 277 | 16,604 | 16,965 | .3 | 1.0 | 59.7 | 61.0 | 1.8 | .9 | .7 | 3.4 |
| 1920-1924 | 149,441 | 81 | 459 | 27,569 | 28,109 | .2 | 1.0 | 61.5 | 62.7 | 1.1 | .9 | .8 | 2.8 |
| 1925-1927 | 108,207 | 71 | 412 | 19,022 | 19,505 | .2 | 1.3 | 58.6 | 60.1 | 1.3 | 1.1 | .8 | 3.2 |
| 1928 | 34,838 | 15 | 130 | 4,654 | 4,799 | .1 | 1.2 | 44.5 | 45.9 | .9 | .9 | .1 | 1.8 |
| *Bar mills* | | | | | | | | | | | | | |
| 1915-1919 | 24,081 | 20 | 77 | 4,745 | 4,842 | 0.3 | 1.1 | 65.6 | 67.0 | 1.7 | 0.7 | 0.7 | 3.1 |
| 1920-1924 | 17,666 | 10 | 44 | 1,869 | 1,923 | .2 | .8 | 35.3 | 36.3 | 1.1 | .6 | .5 | 2.2 |
| 1925-1927 | 9,900 | 3 | 31 | 685 | 719 | .1 | 1.0 | 23.1 | 24.2 | .6 | .8 | .4 | 1.8 |
| 1928 | 3,151 | 4 | 21 | 554 | 579 | .4 | 2.2 | 58.6 | 61.2 | 2.5 | 1.2 | .9 | 4.7 |
| *Heavy-rolling mills* | | | | | | | | | | | | | |
| 1910-1914 | 67,663 | 74 | 261 | 9,007 | 9,342 | 0.4 | 1.3 | 44.4 | 46.2 | 2.1 | 0.9 | 0.6 | 3.6 |
| 1915-1919 | 75,166 | 91 | 275 | 6,950 | 7,316 | .4 | 1.2 | 30.8 | 32.4 | 2.4 | 1.0 | .5 | 3.9 |
| 1920-1924 | 74,944 | 50 | 180 | 4,546 | 4,776 | .2 | .8 | 20.2 | 21.2 | 1.3 | .6 | .4 | 2.3 |
| 1925-1927 | 49,277 | 33 | 129 | 1,658 | 1,820 | .2 | .9 | 11.2 | 12.3 | 1.3 | .9 | .3 | 2.5 |
| 1928 | 18,257 | 5 | 38 | 451 | 494 | .1 | .7 | 8.2 | 9.0 | .6 | .7 | .3 | 1.5 |
| *Plate mills* | | | | | | | | | | | | | |
| 1910-1914 | 27,711 | 19 | 105 | 3,129 | 3,253 | 0.3 | 1.6 | 48.0 | 49.9 | 1.8 | 1.4 | 0.7 | 3.9 |
| 1915-1919 | 35,073 | 25 | 89 | 4,016 | 4,130 | .2 | .8 | 38.2 | 39.2 | 1.4 | .6 | .5 | 2.5 |
| 1920-1924 | 37,891 | 22 | 98 | 3,214 | 3,334 | .2 | .9 | 28.3 | 29.4 | 1.2 | .8 | .4 | 2.4 |
| 1925-1927 | 21,590 | 15 | 59 | 1,061 | 1,135 | .2 | .9 | 16.4 | 17.5 | 1.4 | .7 | .3 | 2.4 |
| 1928 | 7,997 | 2 | 17 | 319 | 338 | .1 | .7 | 13.3 | 14.1 | .5 | .7 | .3 | 1.4 |
| *Puddling mills* | | | | | | | | | | | | | |
| 1917-1919 | 8,460 | 4 | 15 | 1,082 | 1,101 | 0.2 | 0.6 | 42.6 | 43.4 | 0.9 | 0.4 | 0.6 | 1.9 |
| 1920-1924 | 4,406 | ------- | 9 | 797 | 806 | ------- | .7 | 60.3 | 61.0 | ------- | .8 | 1.1 | 1.9 |
| 1925-1927 | 3,739 | 1 | 11 | 491 | 503 | .1 | 1.0 | 43.8 | 44.9 | .5 | 1.5 | .9 | 2.4 |
| 1928 | 1,116 | 1 | 1 | 133 | 135 | .3 | .3 | 39.7 | 40.3 | 1.8 | .1 | 1.0 | 2.9 |
| *Rod mills* | | | | | | | | | | | | | |
| 1915-1919 | 15,218 | 14 | 70 | 1,721 | 1,805 | 0.3 | 1.5 | 37.7 | 39.5 | 1.8 | 1.3 | 0.5 | 3.6 |
| 1920-1924 | 14,425 | 4 | 37 | 982 | 1,023 | .1 | .9 | 22.7 | 23.7 | .6 | .8 | .4 | 1.7 |
| 1925-1927 | 7,909 | 5 | 16 | 349 | 370 | .2 | .7 | 14.7 | 15.6 | 1.3 | .6 | .3 | 2.2 |
| 1928 | 2,582 | 1 | 5 | 93 | 99 | .1 | .7 | 12.0 | 12.8 | .8 | .9 | .4 | 2.0 |

TABLE 3.—ACCIDENTS AND ACCIDENT RATES IN THE IRON AND STEEL INDUSTRY, 1910 TO 1928, BY DEPARTMENT, YEAR, AND PERIOD—Continued

*Sheet mills*

| Year or period | Full-year workers | Number of cases | | | | Frequency rates (per 1,000,000 hours' exposure) | | | | Severity rates (per 1,000 hours' exposure) | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Death | Permanent disability | Temporary disability | Total | Death | Permanent disability | Temporary disability | Total | Death | Permanent disability | Temporary disability | Total |
| 1910–1914 | 128,423 | 88 | 308 | 19,262 | 19,657 | 0.2 | 0.9 | 50.0 | 51.1 | 1.4 | 0.6 | 0.6 | 2.6 |
| 1915–1919 | 104,335 | 37 | 172 | 10,034 | 10,243 | .1 | .5 | 32.1 | 32.7 | .7 | .4 | .4 | 1.5 |
| 1920–1924 | 121,552 | 50 | 278 | 12,479 | 12,807 | .1 | .8 | 24.2 | 35.1 | .8 | .7 | .6 | 2.1 |
| 1925–1927 | 98,652 | 20 | 158 | 6,733 | 6,911 | .1 | .5 | 22.8 | 23.4 | .4 | .5 | .4 | 1.3 |
| 1928 | 37,050 | 10 | 92 | 2,239 | 2,341 | .1 | .8 | 20.1 | 21.1 | .5 | .9 | .3 | 1.8 |
| *Tube mills* | | | | | | | | | | | | | |
| 1910–1914 | 73,338 | 36 | 249 | 8,623 | 8,908 | 0.2 | 1.1 | 39.2 | 40.5 | 1.0 | 0.7 | 0.5 | 2.2 |
| 1915–1919 | 75,108 | 38 | 178 | 4,825 | 5,041 | .2 | .8 | 21.4 | 22.4 | 1.0 | .5 | .3 | 1.8 |
| 1920–1924 | 104,577 | 45 | 268 | 6,815 | 7,128 | .1 | .9 | 21.7 | 22.7 | .9 | .6 | .4 | 1.9 |
| 1925–1927 | 84,394 | 32 | 220 | 3,841 | 4,093 | .1 | .9 | 15.2 | 16.2 | .8 | .6 | .3 | 1.7 |
| 1928 | 22,218 | 6 | 41 | 899 | 946 | .1 | .6 | 13.8 | 14.5 | .6 | .4 | .3 | 1.3 |
| *Unclassified rolling mills* | | | | | | | | | | | | | |
| 1910–1914 | 104,829 | 82 | 360 | 21,501 | 21,943 | 0.3 | 1.2 | 71.8 | 73.3 | 1.7 | 1.1 | 0.9 | 3.7 |
| 1915–1919 | 102,696 | 53 | 218 | 12,644 | 12,915 | .2 | .7 | 41.0 | 41.9 | 1.0 | .5 | .6 | 2.1 |
| 1920–1924 | 109,555 | 55 | 345 | 12,631 | 13,027 | .2 | 1.0 | 39.4 | 39.6 | 1.0 | 1.1 | .6 | 2.7 |
| 1925–1927 | 72,747 | 28 | 230 | 4,712 | 4,970 | .1 | 1.1 | 21.6 | 22.8 | .8 | .8 | .4 | 2.0 |
| 1928 | 23,889 | 11 | 64 | 1,636 | 1,711 | .2 | .6 | 13.8 | 14.5 | .9 | .9 | .4 | 2.2 |
| *Fabricating shops* | | | | | | | | | | | | | |
| 1910–1914 | 108,538 | 98 | 425 | 25,506 | 26,029 | 0.3 | 1.3 | 78.3 | 79.9 | 1.7 | 0.9 | 0.8 | 3.4 |
| 1915–1919 | 80,985 | 59 | 163 | 13,195 | 13,417 | .2 | .7 | 54.3 | 55.2 | 1.5 | .5 | .6 | 2.6 |
| 1920–1924 | 89,880 | 47 | 269 | 13,879 | 14,195 | .2 | 1.0 | 51.5 | 52.7 | 1.0 | .8 | .6 | 2.4 |
| 1925–1927 | 45,708 | 14 | 124 | 1,896 | 2,034 | .1 | .9 | 13.8 | 14.8 | .6 | .8 | .3 | 1.7 |
| 1928 | 12,977 | 3 | 35 | 466 | 504 | .1 | .9 | 12.0 | 13.0 | .5 | .7 | .3 | 1.4 |
| *Forge shops* | | | | | | | | | | | | | |
| 1910–1914 | 6,249 | 8 | 19 | 1,080 | 1,107 | 0.4 | 1.0 | 57.6 | 59.0 | 2.6 | 0.6 | 0.7 | 3.9 |
| 1915–1919 | 12,667 | 9 | 45 | 2,189 | 2,243 | .2 | 1.2 | 57.6 | 59.0 | 1.4 | 1.1 | .9 | 3.4 |
| 1920–1924 | 8,901 | 4 | 34 | 1,596 | 1,634 | .1 | 1.3 | 59.8 | 61.2 | .9 | 1.2 | .9 | 3.0 |
| 1925–1927 | 7,229 | 4 | 28 | 1,264 | 1,296 | .2 | 1.3 | 58.3 | 59.8 | 1.1 | .8 | .7 | 2.6 |
| 1928 | 2,691 | 1 | 7 | 129 | 137 | .1 | .9 | 16.0 | 17.0 | .7 | .8 | .4 | 2.0 |
| *Wire drawing* | | | | | | | | | | | | | |
| 1910–1914 | 59,481 | 21 | 383 | 11,504 | 11,908 | 0.1 | 2.1 | 63.5 | 65.7 | 0.7 | 1.9 | 0.6 | 3.2 |
| 1915–1919 | 52,666 | 12 | 321 | 6,912 | 7,245 | .1 | 2.0 | 43.7 | 45.8 | .5 | 1.6 | .5 | 2.6 |
| 1920–1924 | 62,614 | 11 | 250 | 4,246 | 4,507 | .1 | 1.3 | 22.6 | 24.0 | .4 | 1.5 | .4 | 2.3 |
| 1925–1927 | 38,957 | 10 | 122 | 1,894 | 2,026 | .1 | 1.0 | 16.2 | 17.3 | .5 | 1.0 | .3 | 1.8 |
| 1928 | 13,306 | 5 | 46 | 358 | 409 | .1 | 1.2 | 9.0 | 10.3 | .8 | 1.1 | .2 | 2.1 |
| *Electrical department* | | | | | | | | | | | | | |
| 1910–1914 | 14,921 | 33 | 48 | 1,957 | 2,038 | 0.8 | 1.1 | 45.2 | 47.1 | 4.6 | 1.2 | 0.5 | 6.3 |
| 1915–1919 | 16,023 | 46 | 40 | 1,851 | 1,937 | 1.0 | .8 | 38.5 | 40.3 | 5.7 | 1.0 | .5 | 7.2 |
| 1920–1924 | 19,339 | 23 | 21 | 1,141 | 1,185 | .4 | .4 | 19.7 | 20.5 | 2.4 | .3 | .3 | 3.0 |
| 1925–1927 | 13,779 | 21 | 16 | 398 | 435 | .5 | .4 | 9.6 | 10.5 | 3.0 | .5 | .3 | 3.8 |
| 1928 | 5,449 | 9 | 10 | 84 | 103 | .6 | .6 | 5.1 | 6.3 | 3.3 | .7 | .2 | 4.2 |

TABLE 3.—ACCIDENTS AND ACCIDENT RATES IN THE IRON AND STEEL INDUSTRY, 1910 TO 1928, BY DEPARTMENT, YEAR, AND PERIOD—Continued

*Mechanical department*

| Year or period | Full-year workers | Number of cases | | | | Frequency rates (per 1,000,000 hours' exposure) | | | | Severity rates (per 1,000 hours' exposure) | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Death | Permanent disability | Temporary disability | Total | Death | Permanent disability | Temporary disability | Total | Death | Permanent disability | Temporary disability | Total |
| 1910–1914 | 97,161 | 104 | 392 | 17,794 | 18,292 | 0.4 | 1.3 | 61.0 | 62.7 | 2.1 | 1.1 | 0.8 | 4.0 |
| 1915–1919 | 154,846 | 154 | 492 | 18,556 | 19,202 | .3 | 1.1 | 39.9 | 41.3 | 2.0 | 1.0 | .5 | 3.5 |
| 1920–1924 | 162,121 | 138 | 366 | 10,996 | 11,510 | .3 | .8 | 22.6 | 23.7 | 1.7 | .7 | .3 | 2.8 |
| 1925–1928 | 113,150 | 82 | 225 | 4,913 | 5,220 | .2 | .7 | 14.5 | 15.4 | 1.5 | .7 | .3 | 2.5 |
| 1928 | 40,597 | 28 | 65 | 862 | 955 | .2 | .5 | 7.1 | 7.8 | 1.4 | .6 | .2 | 2.1 |
| *Power houses* | | | | | | | | | | | | | |
| 1912–1914 | 8,083 | 6 | 21 | 544 | 571 | 0.2 | 0.9 | 22.4 | 23.5 | 1.5 | 0.8 | 0.3 | 2.6 |
| 1915–1919 | 13,219 | 27 | 21 | 739 | 787 | .7 | .5 | 18.6 | 19.8 | 4.1 | .6 | .3 | 5.0 |
| 1920–1924 | 18,878 | 17 | 18 | 638 | 673 | .3 | .3 | 11.3 | 11.9 | 1.8 | .3 | .2 | 2.3 |
| 1925–1927 | 11,552 | 6 | 15 | 337 | 358 | .2 | .4 | 9.7 | 10.3 | 1.0 | .3 | .2 | 1.5 |
| 1928 | 2,659 | ------- | 2 | 23 | 25 | ------- | .3 | 2.9 | 3.1 | ------- | .6 | .1 | .7 |
| *Yards* | | | | | | | | | | | | | |
| 1910–1914 | 55,932 | 112 | 243 | 8,112 | 8,467 | 0.7 | 1.5 | 48.6 | 50.8 | 4.0 | 1.4 | 0.6 | 6.0 |
| 1915–1919 | 53,890 | 106 | 258 | 5,685 | 6,049 | .7 | 1.6 | 35.2 | 37.5 | 3.9 | 1.6 | .6 | 6.1 |
| 1920–1924 | 42,546 | 53 | 125 | 3,190 | 3,366 | .4 | 1.0 | 25.0 | 26.4 | 2.5 | 1.2 | .4 | 4.1 |
| 1925–1927 | 24,738 | 41 | 62 | 1,414 | 1,517 | .6 | .8 | 19.0 | 20.4 | 3.3 | 1.0 | .4 | 4.7 |
| 1928 | 7,434 | 4 | 29 | 164 | 197 | .2 | 1.3 | 7.4 | 8.8 | 1.1 | 1.7 | .2 | 3.0 |
| *Erection of structural steel* | | | | | | | | | | | | | |
| 1912–1914 | 2,157 | 26 | 24 | 738 | 788 | 4.0 | 3.7 | 114.0 | 121.7 | 24.1 | 5.5 | 1.8 | 31.4 |
| 1915–1919 | 4,979 | 45 | 35 | 1,522 | 1,602 | 3.0 | 2.3 | 110.9 | 107.2 | 18.1 | 2.6 | 1.6 | 22.3 |
| 1920–1924 | 3,726 | 29 | 35 | 1,026 | 1,090 | 2.6 | 3.1 | 91.8 | 97.5 | 15.6 | 2.5 | 1.8 | 19.9 |
| 1925–1927 | 2,527 | 23 | 15 | 502 | 540 | 3.1 | 2.0 | 67.1 | 72.2 | 18.4 | 1.9 | 1.1 | 21.4 |
| 1928 | 745 | 9 | 4 | 125 | 138 | 4.0 | 1.8 | 55.9 | 61.8 | 24.2 | 2.3 | 1.1 | 27.6 |
| *Coke ovens* [1] | | | | | | | | | | | | | |
| 1912–1914 | 13,282 | 27 | 39 | 1,651 | 1,717 | 0.7 | 1.0 | 41.4 | 43.1 | 4.1 | 1.5 | 0.6 | 6.2 |
| 1915–1919 | 28,901 | 66 | 44 | 2,095 | 2,205 | .8 | .5 | 24.1 | 25.4 | 4.6 | .5 | .4 | 5.5 |
| 1920–1924 | 37,409 | 26 | 45 | 1,577 | 1,648 | .2 | .4 | 14.1 | 14.7 | 1.4 | .7 | .2 | 2.3 |
| 1925–26 | 28,461 | 30 | 50 | 610 | 690 | .4 | .6 | 7.1 | 8.1 | 2.1 | .7 | .1 | 2.9 |
| 1928 | 11,157 | 8 | 13 | 171 | 192 | .2 | .4 | 5.1 | 5.7 | 1.4 | .6 | .1 | 2.1 |
| *Miscellaneous departments* | | | | | | | | | | | | | |
| | Axle works | | | | | | | | | | | | |
| 1912–1914 | 1,326 | 2 | 4 | 438 | 444 | 0.5 | 1.0 | 110.1 | 111.6 | 3.0 | 2.1 | 1.6 | 6.7 |
| 1915–1919 | 2,467 | ------- | 4 | 338 | 342 | ------- | .5 | 45.7 | 46.2 | ------- | 1.2 | .7 | 1.9 |
| 1920–1924 | 2,734 | 2 | 1 | 175 | 178 | .2 | .1 | 21.1 | 21.5 | 1.4 | (2) | .3 | 1.7 |
| 1928 | 191 | ------- | 1 | 1 | 2 | ------- | 1.7 | 1.7 | 3.5 | ------- | .5 | .3 | .8 |

[1] Covers only those coke ovens operated in connection with steel works.
[2] Less than one-tenth of one.

TABLE 3.—ACCIDENTS AND ACCIDENT RATES IN THE IRON AND STEEL INDUSTRY, 1910 TO 1928, BY DEPARTMENT, YEAR, AND PERIOD—Continued

*Miscellaneous departments*—Continued

| Year or period | Full-year workers | Number of cases | | | | Frequency rates (per 1,000,000 hours' exposure) | | | | Severity rates (per 1,000 hours' exposure) | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Death | Permanent disability | Temporary disability | Total | Death | Permanent disability | Temporary disability | Total | Death | Permanent disability | Temporary disability | Total |
| **Car wheels** | | | | | | | | | | | | | |
| 1912–1914 | 2,367 | 3 | 15 | 609 | 627 | 0.4 | 2.1 | 85.8 | 88.3 | 2.5 | 0.9 | 1.3 | 4.7 |
| 1915–1919 | 5,904 | 7 | 18 | 1,313 | 1,338 | .4 | 1.0 | 74.1 | 75.5 | 2.4 | .5 | 1.0 | 3.9 |
| 1920–1924 | 5,050 | 3 | 10 | 595 | 608 | .2 | .7 | 39.3 | 40.2 | 1.2 | .4 | .7 | 2.3 |
| 1925–1927 | 2,275 | ------- | 10 | 118 | 128 | ------- | 1.5 | 17.3 | 18.8 | ------- | 1.9 | .5 | 2.4 |
| 1928 | 771 | 1 | 1 | 7 | 9 | .4 | .4 | 3.0 | 3.9 | 2.6 | .8 | .1 | 3.5 |
| **Docks and ore yards** | | | | | | | | | | | | | |
| 1911–1914 | 1,293 | 3 | 11 | 139 | 153 | 0.8 | 2.8 | 35.8 | 39.4 | 4.6 | 2.8 | 0.8 | 8.2 |
| 1915–1919 | 1,383 | 6 | 12 | 175 | 193 | 1.4 | 2.9 | 42.2 | 46.5 | 8.7 | 4.1 | .5 | 13.3 |
| 1920–1924 | 1,761 | 4 | 12 | 57 | 73 | .8 | 2.3 | 10.8 | 13.9 | 4.5 | 5.8 | .3 | 10.6 |
| 1925–1927 | 1,380 | 3 | 2 | 16 | 21 | .7 | .5 | 3.9 | 5.1 | 4.3 | .8 | .2 | 5.3 |
| 1928 | 427 | ------- | 1 | 7 | 8 | ------- | .8 | 5.5 | 6.2 | ------- | 1.9 | .1 | 2.0 |
| **Woven wire fence** | | | | | | | | | | | | | |
| 1915–1919 | 7,311 | 1 | 47 | 684 | 732 | 0.1 | 2.1 | 31.2 | 33.4 | 0.3 | 1.6 | 0.3 | 2.2 |
| 1920–1924 | 6,623 | 1 | 24 | 399 | 424 | .1 | 1.2 | 20.1 | 21.4 | .3 | 1.2 | .3 | 1.8 |
| 1925–1927 | 3,857 | ------- | 10 | 235 | 245 | ------- | .9 | 20.3 | 21.2 | ------- | .6 | .3 | .9 |
| 1928 | 1,534 | 1 | 2 | 57 | 60 | .2 | .4 | 12.4 | 13.0 | 1.3 | .8 | .2 | 2.3 |
| **Nails and staples** | | | | | | | | | | | | | |
| 1915–1919 | 9,818 | 2 | 56 | 782 | 840 | 0.1 | 1.9 | 26.5 | 28.5 | 0.4 | 1.3 | 0.3 | 2.0 |
| 1920–1924 | 10,890 | 3 | 37 | 588 | 628 | .1 | 1.1 | 18.0 | 19.2 | .6 | 1.0 | .2 | 1.8 |
| 1925–1927 | 6,007 | ------- | 9 | 223 | 232 | ------- | .5 | 12.4 | 12.9 | ------- | .6 | .2 | .8 |
| 1928 | 1,522 | 2 | 2 | 44 | 48 | .4 | .4 | 9.4 | 10.5 | 2.6 | .2 | .1 | 2.9 |
| **Hot mills** | | | | | | | | | | | | | |
| 1920–1924 | 30,018 | 11 | 39 | 3,223 | 3,273 | 0.1 | 0.4 | 35.8 | 36.3 | 0.7 | 0.4 | 0.5 | 1.6 |
| 1925–1927 | 20,741 | 9 | 45 | 2,420 | 2,474 | .1 | .7 | 38.9 | 39.7 | .9 | .6 | .5 | 2.0 |
| 1928 | 9,749 | 2 | 10 | 836 | 848 | .1 | .3 | 28.6 | 29.0 | .4 | .2 | .3 | .9 |
| **Cold rolling** | | | | | | | | | | | | | |
| 1926 | 1,824 | ------- | 2 | 211 | 213 | ------- | 0.4 | 38.3 | 38.7 | ------- | 0.8 | 0.4 | 1.2 |
| 1927 | 1,686 | 1 | 6 | 187 | 194 | 0.2 | 1.2 | 37.0 | 38.4 | 1.2 | .4 | .6 | 2.2 |
| 1928 | 1,837 | 1 | 3 | 179 | 183 | .2 | .5 | 32.5 | 33.2 | 1.1 | .4 | .4 | 1.9 |
| **Unclassified** | | | | | | | | | | | | | |
| 1915–1919 | 293,329 | 237 | 706 | 30,612 | 31,555 | 0.3 | 0.8 | 34.8 | 35.9 | 1.6 | 1.3 | 0.5 | 3.4 |
| 1920–1924 | 425,704 | 265 | 1,186 | 40,275 | 41,736 | .2 | .9 | 31.5 | 32.6 | 1.2 | .9 | .5 | 2.6 |
| 1925–1927 | 341,074 | 152 | 896 | 24,880 | 25,928 | .1 | .9 | 24.4 | 25.4 | .9 | .7 | .4 | 2.0 |
| 1928 | 105,037 | 48 | 236 | 6,538 | 6,822 | .2 | .8 | 20.8 | 21.7 | .9 | .6 | .6 | 2.2 |

In order to give the advantage of large volume, and so smooth out the irregularities which occur when smaller groups are used, Table 4 has been computed with the use of a 5-year moving average, for some of the more important departments. The table presents the figures for the 5-year periods ending with each year from 1911 to 1928.

TABLE 4.—ACCIDENT EXPERIENCES OF THE IRON AND STEEL INDUSTRY BY 5-YEAR MOVING AVERAGE

| 5-year period ending— | The industry | Blast furnaces | Bessemer | Open hearths | Foundries | Heavy rolling | Plate mills | Sheet mills |
|---|---|---|---|---|---|---|---|---|
| | Frequency rate (per 1,000,000 hours' exposure) | | | | | | | |
| 1911 | 69.2 | 76.1 | 101.5 | 84.2 | 60.1 | 61.0 | 69.4 | 44.1 |
| 1912 | 65.1 | 67.7 | 79.5 | 79.5 | 61.5 | 57.0 | 60.8 | 47.9 |
| 1913 | 62.1 | 62.4 | 92.3 | 78.6 | 65.1 | 51.7 | 55.9 | 49.1 |
| 1914 | 59.2 | 62.3 | 89.8 | 75.0 | 63.6 | 46.1 | 49.9 | 51.1 |
| 1915 | 53.3 | 50.3 | 65.0 | 67.6 | 59.3 | 39.4 | 44.7 | 48.1 |
| 1916 | 51.3 | 47.8 | 76.1 | 64.8 | 57.8 | 37.3 | 41.5 | 47.4 |
| 1917 | 48.2 | 44.1 | 68.3 | 58.4 | 60.4 | 32.1 | 36.6 | 41.5 |
| 1918 | 43.6 | 40.5 | 60 7 | 53.5 | 57.0 | 31.1 | 39.8 | 35.8 |
| 1919 | 41.6 | 39.0 | 57.7 | 50.5 | 61.0 | 32.4 | 39.2 | 32.7 |
| 1920 | 41.1 | 38.0 | 53.1 | 50.2 | 61.0 | 31.4 | 38.4 | 33.7 |
| 1921 | 39.5 | 36.3 | 47.0 | 44.8 | 63.1 | 29.9 | 37.6 | 33.4 |
| 1922 | 36.5 | 34.0 | 39.9 | 41.3 | 60.4 | 27.6 | 36.7 | 35.2 |
| 1923 | 34.9 | 32.9 | 30.5 | 33.0 | 61.7 | 23.8 | 31.4 | 37.2 |
| 1924 | 33.6 | 30.7 | 24.9 | 32.9 | 62.7 | 21.2 | 29.4 | 35.1 |
| 1925 | 31.3 | 29.0 | 17.0 | 29.9 | 63.1 | 18.1 | 26.8 | 33.2 |
| 1926 | 29.9 | 28.7 | 16.7 | 28.3 | 62.8 | 16.6 | 25.6 | 30.6 |
| 1927 | 24.7 | 24.6 | 13.5 | 22.9 | 55.1 | 13.2 | 19.2 | 22.9 |
| 1928 | 27.4 | 27.1 | 15.3 | 24.7 | 59.8 | 14.4 | 21.8 | 26.7 |
| | Severity rate per 1,000 hours' exposure | | | | | | | |
| 1911 | 5.0 | 10.6 | 7.6 | 7.5 | 2.7 | 4.4 | 5.1 | 3.1 |
| 1912 | 4.3 | 8.8 | 7.4 | 6.6 | 3.1 | 4.2 | 4.1 | 2.8 |
| 1913 | 4.4 | 8.3 | 6.7 | 6.8 | 3.5 | 4.0 | 3.8 | 3.0 |
| 1914 | 4.1 | 7.0 | 6.4 | 6.6 | 3.6 | 3.6 | 3.9 | 2.6 |
| 1915 | 3.6 | 6.2 | 5.3 | 5.8 | 3.3 | 3 4 | 3.1 | 2.2 |
| 1916 | 3.7 | 5.8 | 6.1 | 5.5 | 3.1 | 3.5 | 2.8 | 2.3 |
| 1917 | 3.7 | 5.6 | 7.1 | 5.1 | 3.3 | 3.6 | 2.6 | 2.1 |
| 1918 | 3.5 | 5.4 | 7.3 | 5.8 | 3.2 | 3.4 | 2.6 | 1.8 |
| 1919 | 3.6 | 5.8 | 6.9 | 6.5 | 3.4 | 3.9 | 2.5 | 1.5 |
| 1920 | 3.5 | 5.7 | 6.3 | 6.3 | 3.2 | 3.5 | 2.6 | 1.8 |
| 1921 | 3.4 | 5.7 | 5.4 | 5.8 | 3.2 | 3.3 | 2.5 | 1.7 |
| 1922 | 3.1 | 5.5 | 4.2 | 5.3 | 2.7 | 2.9 | 2.5 | 1.8 |
| 1923 | 3.0 | 5.0 | 3.2 | 4.2 | 2.7 | 2.4 | 2.4 | 1.9 |
| 1924 | 2.8 | 4.5 | 2.6 | 4.2 | 2.8 | 2.3 | 2.4 | 2.1 |
| 1925 | 2.7 | 4.6 | 3.2 | 4.0 | 3.1 | 2.6 | 2.6 | 1.9 |
| 1926 | 2.8 | 4.7 | 4.0 | 4.6 | 3.2 | 2.6 | 2.6 | 1.8 |
| 1927 | 2.4 | 4.1 | 3.7 | 4.3 | 2.9 | 2.4 | 2.2 | 1.0 |
| 1928 | 2.7 | 4.4 | 4.1 | 4.5 | 3.0 | 2.4 | 2.4 | 1.7 |

Table 5 presents the data for the several States from 1922 to 1928. This table is not very important from an accident-prevention standpoint, but gives an idea regarding the size of the operations in the various States. The declining tendency of the rates is manifest in the State records, and this decline is most pronounced in those States which have carried on accident-prevention activities for the longest time.

TABLE 5.—ACCIDENT FREQUENCY AND SEVERITY RATES IN THE IRON AND STEEL INDUSTRY, 1922 TO 1928, BY STATE AND YEAR

| State and year | Full-year workers | Number of cases | | | | Frequency rates (per 1,000,000 hours' exposure) | | | | Severity rates (per 1,000 hours' exposure) | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Death | Permanent disability | Temporary disability | Total | Death | Permanent disability | Temporary disability | Total | Death | Permanent disability | Temporary disability | Total |
| **Alabama:** | | | | | | | | | | | | | |
| 1922 | 10,998 | 10 | 51 | 1,163 | 1,224 | 0.30 | 1.55 | 35.25 | 37.10 | 1.82 | 1.17 | 0.48 | 3.47 |
| 1923 | 11,915 | 7 | 78 | 1,348 | 1,433 | .20 | 2.18 | 37.74 | 40.09 | 1.18 | 1.77 | .87 | 3.82 |
| 1924 | 13,705 | 16 | 41 | 1,127 | 1,184 | .39 | 1.00 | 27.41 | 28.80 | 2.33 | 1.06 | .62 | 4.01 |
| 1925 | 15,244 | 14 | 46 | 508 | 568 | .31 | 1.00 | 12.07 | 13.38 | 1.84 | 1.37 | .19 | 3.40 |
| 1926 | 19,887 | 30 | 130 | 1,370 | 1,530 | .50 | 2.18 | 22.95 | 25.63 | 3.02 | 1.56 | .39 | 4.97 |
| 1927 | 14,493 | 12 | 77 | 809 | 898 | .28 | 1.77 | 18.61 | 20.66 | 1.66 | 1.43 | .36 | 3.45 |
| 1928 | 13,258 | 16 | 76 | 954 | 1,046 | .4 | .19 | 24.0 | 26.3 | 2.4 | 1.6 | .6 | 4.7 |
| **California:** | | | | | | | | | | | | | |
| 1922 | 4,013 | 3 | 35 | 711 | 749 | .25 | 2.91 | 59.05 | 62.21 | 1.50 | 2.63 | .80 | 4.93 |
| 1923 | 3,113 | 3 | 11 | 597 | 611 | .32 | 1.18 | 63.92 | 65.42 | 1.93 | 1.19 | .75 | 3.87 |
| 1924 | 2,901 | 2 | 16 | 522 | 540 | .23 | 1.84 | 59.97 | 62.04 | 1.38 | 1.43 | 1.34 | 4.15 |
| 1925 | 3,018 | 1 | 10 | 278 | 289 | .11 | 1.11 | 30.70 | 31.92 | .66 | 1.56 | .71 | 2.93 |
| 1926 | 2,908 | ------- | 16 | 825 | 841 | ------- | 1.86 | 95.93 | 97.82 | ------- | 2.09 | 1.20 | 3.29 |
| 1927 | 1,370 | ------- | 4 | 225 | 229 | ------- | .97 | 54.76 | 55.73 | ------- | 1.02 | .91 | 1.93 |
| 1928 | 4,660 | 1 | 14 | 1,209 | 1,224 | .1 | 1.0 | 86.5 | 87.6 | .4 | 1.1 | 1.1 | 2.6 |
| **Colorado:** | | | | | | | | | | | | | |
| 1922 | 3,351 | 3 | 2 | 367 | 372 | .30 | .20 | 36.51 | 37.01 | 1.79 | .27 | .36 | 2.42 |
| 1923 | 4,164 | 7 | 13 | 462 | 482 | .56 | 1.04 | 36.98 | 38.58 | 3.36 | 1.22 | .76 | 5.34 |
| 1924 | 4,269 | 6 | 22 | 452 | 480 | .47 | 1.72 | 35.29 | 37.48 | 2.81 | 1.52 | .63 | 4.96 |
| 1925 | 4,243 | 3 | 14 | 592 | 609 | .24 | 1.10 | 46.50 | 47.84 | 1.41 | .93 | .78 | 3.12 |
| 1926 | 4,507 | 2 | 13 | 668 | 683 | .15 | .96 | 49.48 | 50.59 | .89 | 1.15 | .71 | 2.75 |
| 1927 | 4,074 | 6 | 27 | 474 | 507 | .49 | 2.21 | 38.78 | 41.48 | 2.95 | 1.75 | .51 | 5.21 |
| 1928 | 3,439 | 2 | 16 | 502 | 520 | .2 | 1.6 | 48.7 | 50.4 | 1.2 | 1.8 | 6.1 | 9.0 |
| **Connecticut:** | | | | | | | | | | | | | |
| 1922 | 3,778 | 3 | 22 | 510 | 535 | .26 | 1.94 | 44.99 | 47.19 | 1.59 | 1.38 | .67 | 3.64 |
| 1923 | 5,307 | 5 | 34 | 446 | 485 | .31 | 2.14 | 28.01 | 30.46 | 1.88 | 1.58 | .27 | 3.73 |
| 1924 | 5,639 | 6 | 40 | 522 | 568 | .35 | 2.36 | 30.85 | 33.56 | 2.13 | 1.31 | .43 | 3.87 |
| 1925 | 7,263 | 5 | 49 | 778 | 832 | .23 | 2.24 | 35.72 | 38.19 | 1.38 | .28 | .35 | 2.01 |
| 1926 | 2,908 | 1 | 47 | 366 | 414 | .13 | 5.40 | 42.07 | 47.60 | .68 | 2.47 | .72 | 3.81 |
| 1927 | 4,458 | 1 | 27 | 276 | 304 | .07 | 1.97 | 20.09 | 22.13 | .44 | 1.58 | .34 | 2.36 |
| 1928 | 5,997 | 1 | 15 | 402 | 418 | .1 | .8 | 22.3 | 23.2 | .3 | .7 | .3 | 1.3 |
| **Illinois:** | | | | | | | | | | | | | |
| 1922 | 23,926 | 16 | 95 | 2,370 | 2,481 | .22 | 1.32 | 33.02 | 34.56 | 1.34 | 1.00 | .44 | 2.78 |
| 1923 | 40,097 | 39 | 171 | 3,753 | 3,963 | .32 | 1.42 | 31.20 | 32.94 | 1.95 | 1.63 | .55 | 4.13 |
| 1924 | 38,147 | 21 | 126 | 2,934 | 3,081 | .19 | 1.13 | 26.26 | 27.58 | 1.13 | .98 | .21 | 2.32 |
| 1925 | 35,810 | 20 | 120 | 2,551 | 2,691 | .19 | 1.12 | 23.75 | 25.06 | 1.12 | 1.32 | .36 | 2.80 |
| 1926 | 37,574 | 25 | 114 | 2,916 | 3,055 | .22 | 1.01 | 25.87 | 27.10 | 1.33 | .82 | .38 | 2.53 |
| 1927 | 49,576 | 20 | 124 | 1,611 | 1,755 | .13 | .83 | 10.83 | 11.79 | .81 | .76 | .19 | 1.76 |
| 1928 | 30,171 | 14 | 132 | 1,761 | 1,907 | .2 | 1.5 | 19.5 | 21.1 | .9 | 1.5 | .4 | 2.8 |
| **Indiana:** | | | | | | | | | | | | | |
| 1922 | 36,683 | 18 | 113 | 2,200 | 2,331 | .16 | 1.03 | 20.05 | 21.24 | .98 | .95 | .27 | 2.20 |
| 1923 | 22,887 | 12 | 67 | 1,746 | 1,825 | .17 | .98 | 25.43 | 26.58 | 1.05 | .86 | .33 | 2.34 |
| 1924 | 34,846 | 30 | 69 | 1,591 | 1,690 | .29 | .66 | 15.22 | 16.17 | 1.72 | .75 | .28 | 2.75 |
| 1925 | 32,743 | 25 | 86 | 2,110 | 2,221 | .25 | .88 | 21.48 | 22.61 | 1.53 | .73 | .31 | 2.57 |
| 1926 | 38,735 | 42 | 133 | 1,405 | 1,580 | .36 | 1.14 | 12.09 | 13.59 | 2.17 | .98 | .22 | 3.37 |
| 1927 | 43,120 | 13 | 92 | 1,302 | 1,407 | .10 | .71 | 10.07 | 10.88 | .60 | .58 | .19 | 1.37 |
| 1928 | 31,921 | 13 | 109 | 913 | 1,035 | .1 | 1.1 | 9.5 | 10.8 | .8 | .9 | .2 | 1.9 |
| **Kentucky:** | | | | | | | | | | | | | |
| 1922 | 1,396 | 2 | 10 | 477 | 489 | .48 | 2.39 | 113.89 | 116.76 | 1.43 | 2.87 | 1.82 | 6.12 |
| 1923 | 2,601 | 5 | 18 | 899 | 922 | .64 | 2.31 | 115.22 | 118.17 | 3.84 | 4.31 | .87 | 9.02 |
| 1924 | 1,734 | 1 | 9 | 144 | 154 | .19 | 1.73 | 27.68 | 29.60 | 1.15 | 1.58 | .39 | 3.12 |
| 1925 | 2,550 | 13 | 15 | 193 | 221 | 1.70 | 1.96 | 25.23 | 28.89 | 10.20 | 1.83 | .39 | 12.42 |
| 1926 | 3,744 | 3 | 30 | 273 | 300 | .26 | 2.67 | 24.37 | 27.30 | 1.60 | 2.57 | .25 | 4.42 |
| 1927 | 4,450 | 5 | 26 | 295 | 326 | .37 | 1.95 | 22.10 | 24.42 | 2.25 | 1.62 | .35 | 4.22 |
| 1928 | 4,909 | 5 | 30 | 276 | 311 | .3 | 2.0 | 18.7 | 21.1 | 2.0 | 3.1 | .3 | 5.4 |
| **Maryland:** | | | | | | | | | | | | | |
| 1927 | 10,973 | 18 | 15 | 1,080 | 1,113 | .55 | .46 | 32.81 | 33.82 | 3.28 | .52 | .58 | 4.38 |
| 1928 | 12,149 | 8 | 17 | 770 | 795 | .29 | .50 | 21.10 | 21.80 | 1.30 | .90 | .40 | 2.60 |
| **Massachusetts:** | | | | | | | | | | | | | |
| 1922 | 5,610 | 7 | 29 | 337 | 373 | .41 | 1.71 | 19.90 | 22.02 | 2.48 | 1.64 | .53 | 4.65 |
| 1923 | 5,018 | 4 | 26 | 230 | 260 | .27 | 1.73 | 15.28 | 17.28 | 1.59 | 1.08 | .57 | 3.24 |
| 1924 | 7,580 | 3 | 22 | 246 | 271 | .13 | .97 | 10.82 | 11.92 | .79 | 1.55 | .29 | 2.63 |
| 1925 | 6,645 | 1 | 7 | 126 | 134 | .05 | .35 | 6.32 | 6.72 | .30 | .33 | .21 | .84 |
| 1926 | 7,150 | 5 | 18 | 247 | 270 | .23 | .83 | 11.48 | 12.54 | 1.42 | .78 | .32 | 2.52 |
| 1927 | 7,230 | 5 | 13 | 229 | 247 | .23 | .60 | 10.56 | 11.39 | 1.38 | .63 | .27 | 2.28 |
| 1928 | 6,723 | 2 | 21 | 171 | 194 | .10 | 1.00 | 8.50 | 9.60 | .60 | .80 | .20 | 1.60 |

TABLE 5.—ACCIDENT FREQUENCY AND SEVERITY RATES IN THE IRON AND STEEL INDUSTRY, 1922 TO 1928, BY STATE AND YEAR—Continued

| State and year | Full-year workers | Number of cases | | | | Frequency rates (per 1,000,000 hours' exposure) | | | | Severity rates (per 1,000 hours' exposure) | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Death | Permanent disability | Temporary disability | Total | Death | Permanent disability | Temporary disability | Total | Death | Permanent disability | Temporary disability | Total |
| Michigan: | | | | | | | | | | | | | |
| 1922 | 3,928 | 6 | 16 | 916 | 938 | 0.51 | 1.36 | 77.73 | 79.60 | 3.05 | 1.29 | 0.86 | 5.20 |
| 1923 | 4,399 | 11 | 19 | 984 | 1,014 | .83 | 1.44 | 74.57 | 76.84 | 5.00 | 1.05 | .93 | 6.98 |
| 1924 | 2,457 | 4 | 14 | 583 | 601 | .54 | 1.90 | 79.08 | 81.52 | 3.26 | 3.36 | .90 | 7.72 |
| 1925 | 4,869 | 4 | 8 | 1,093 | 1,105 | .27 | .56 | 74.83 | 75.66 | 1.64 | .70 | .92 | 3.26 |
| 1926 | 5,643 | 3 | 16 | 1,086 | 1,105 | .18 | .95 | 64.15 | 65.28 | 1.06 | .67 | .89 | 2.62 |
| 1927 | 3,489 | 2 | 10 | 620 | 632 | .19 | .96 | 59.23 | 60.38 | 1.15 | .51 | .79 | 2.45 |
| 1928 | 3,124 | 2 | 3 | 758 | 763 | .20 | .30 | 80.90 | 81.40 | 1.30 | .10 | 1.00 | 2.40 |
| Missouri: | | | | | | | | | | | | | |
| 1922 | 4,676 | 6 | 12 | 1,632 | 1,650 | .43 | .86 | 116.35 | 117.64 | 2.57 | 1.01 | 1.41 | 4.99 |
| 1923 | 4,255 | | 4 | 903 | 907 | | .31 | 70.74 | 71.05 | | .33 | .84 | 1.17 |
| 1924 | 1,284 | 1 | 8 | 266 | 275 | .26 | 2.08 | 69.06 | 71.40 | 1.56 | 1.78 | .76 | 4.10 |
| 1925 | 3,662 | 1 | 2 | 294 | 297 | .09 | .18 | 26.76 | 27.03 | .55 | .19 | .34 | 1.08 |
| 1926 | 3,215 | 3 | 6 | 443 | 452 | .31 | .61 | 46.14 | 47.06 | 1.86 | .68 | .54 | 3.08 |
| 1927 | 2,913 | 1 | 3 | 268 | 272 | .11 | .34 | 30.67 | 31.12 | .69 | .19 | .56 | 1.44 |
| 1928 | 2,934 | 1 | 2 | 141 | 144 | .10 | .20 | 16.00 | 16.40 | .70 | .10 | .40 | 1.10 |
| New Jersey: | | | | | | | | | | | | | |
| 1922 | 6,597 | 1 | 37 | 625 | 663 | .05 | 1.87 | 31.58 | 33.50 | .30 | 1.20 | .55 | 2.05 |
| 1923 | 7,341 | | 47 | 780 | 827 | | 2.13 | 35.42 | 37.55 | | 2.17 | .57 | 2.74 |
| 1924 | 7,175 | | 47 | 772 | 819 | | 2.18 | 35.87 | 38.05 | | 2.69 | .70 | 3.39 |
| 1925 | 6,923 | 4 | 31 | 769 | 804 | .19 | 1.49 | 37.03 | 37.71 | 1.16 | 1.46 | .59 | 3.21 |
| 1926 | 7,896 | 4 | 30 | 568 | 602 | .16 | 1.26 | 23.96 | 25.38 | 1.01 | .92 | .37 | 2.30 |
| 1927 | 7,420 | 6 | 42 | 331 | 379 | .27 | 1.89 | 14.87 | 17.03 | 1.62 | 1.68 | .30 | 3.60 |
| 1928 | 7,538 | 1 | 48 | 387 | 436 | (1) | 2.10 | 17.10 | 19.30 | .30 | 1.30 | .30 | 1.90 |
| New York: | | | | | | | | | | | | | |
| 1922 | 9,785 | 11 | 47 | 1,625 | 1,683 | .43 | 1.85 | 64.13 | 66.42 | 2.60 | 1.82 | .99 | 5.41 |
| 1923 | 11,377 | 9 | 65 | 2,141 | 2,215 | .26 | 1.90 | 62.73 | 64.89 | 1.58 | 1.84 | .73 | 4.15 |
| 1924 | 6,903 | 5 | 51 | 1,107 | 1,163 | .24 | 2.46 | 53.46 | 56.16 | 1.45 | 2.03 | .94 | 4.42 |
| 1925 | 10,372 | 7 | 66 | 2,725 | 2,799 | .22 | 2.12 | 87.58 | 89.92 | 1.35 | 2.35 | .89 | 4.59 |
| 1926 | 9,442 | 7 | 43 | 1,821 | 1,871 | .24 | 1.51 | 64.34 | 66.09 | 1.48 | .90 | .95 | 3.33 |
| 1927 | 8,785 | 5 | 45 | 884 | 934 | .19 | 1.71 | 33.54 | 35.44 | 1.14 | 1.32 | .73 | 3.19 |
| 1928 | 16,531 | 14 | 57 | 1,250 | 1,321 | .30 | 1.20 | 25.20 | 26.60 | 1.70 | 1.10 | .60 | 3.40 |
| Ohio: | | | | | | | | | | | | | |
| 1922 | 51,424 | 42 | 125 | 5,268 | 5,435 | .27 | .81 | 34.15 | 35.23 | 1.63 | .66 | .48 | 2.77 |
| 1923 | 77,979 | 39 | 201 | 5,763 | 6,003 | .17 | .86 | 24.63 | 25.66 | 1.00 | .87 | .39 | 2.26 |
| 1924 | 75,282 | 57 | 181 | 5,223 | 5,461 | .25 | .80 | 23.13 | 24.18 | 1.54 | .98 | .36 | 2.88 |
| 1925 | 86,820 | 33 | 150 | 5,059 | 5,242 | .13 | .58 | 19.42 | 20.13 | .76 | .53 | .25 | 1.54 |
| 1926 | 92,678 | 48 | 172 | 5,630 | 5,850 | .17 | .62 | 20.25 | 21.04 | 1.03 | .44 | .23 | 1.71 |
| 1927 | 91,377 | 37 | 190 | 5,313 | 5,540 | .13 | .69 | 19.38 | 20.20 | .81 | .58 | .32 | 1.71 |
| 1928 | 65,955 | 53 | 181 | 5,066 | 5,300 | .30 | .90 | 25.60 | 26.70 | 1.60 | .80 | .50 | 2.90 |
| Pennsylvania: | | | | | | | | | | | | | |
| 1922 | 102,186 | 60 | 103 | 8,364 | 8,527 | .20 | .34 | 27.28 | 27.82 | 1.17 | .34 | .45 | 1.96 |
| 1923 | 140,259 | 112 | 244 | 12,188 | 12,544 | .27 | .58 | 28.97 | 29.82 | 1.60 | .59 | 1.03 | 3.22 |
| 1924 | 154,800 | 54 | 244 | 8,382 | 8,680 | .12 | .53 | 18.05 | 18.70 | .70 | .34 | .30 | 1.34 |
| 1925 | 149,089 | 75 | 218 | 9,527 | 9,820 | .18 | .49 | 21.30 | 21.97 | 1.01 | .45 | .26 | 1.72 |
| 1926 | 196,124 | 77 | 204 | 7,763 | 8,044 | .13 | .34 | 13.17 | 13.64 | .79 | .09 | .20 | 1.08 |
| 1927 | 146,595 | 103 | 239 | 6,727 | 7,069 | .23 | .54 | 15.30 | 16.07 | 1.41 | .53 | .31 | 2.25 |
| 1928 | 147,455 | 93 | 212 | 5,066 | 5,300 | .20 | .50 | 14.50 | 15.20 | 1.30 | .50 | .30 | 2.10 |
| Tennessee: | | | | | | | | | | | | | |
| 1922 | 1,543 | | 4 | 220 | 228 | | .86 | 47.52 | 48.38 | | 1.49 | .69 | 2.18 |
| 1923 | 2,258 | 9 | 19 | 437 | 465 | 1.33 | 2.80 | 64.50 | 68.63 | 7.97 | 2.26 | 1.03 | 11.23 |
| 1924 | 1,503 | 3 | 6 | 77 | 86 | .67 | 1.33 | 17.08 | 19.07 | 3.99 | 1.60 | .25 | 5.84 |
| 1925 | 1,256 | 1 | 2 | 196 | 199 | .27 | .53 | 52.02 | 52.82 | 1.59 | 1.67 | .69 | 3.95 |
| 1926 | 1,139 | 1 | | 32 | 33 | .30 | | 9.41 | 9.71 | 1.75 | | .13 | 1.88 |
| 1927 | 1,354 | 1 | 1 | 114 | 116 | .25 | .25 | 28.07 | 28.57 | 1.48 | .44 | .48 | 2.40 |
| 1928 | 1,063 | | 4 | 65 | 69 | | 1.30 | 20.40 | 21.60 | | .90 | .40 | 1.30 |
| Washington: | | | | | | | | | | | | | |
| 1922 | 534 | | 6 | 80 | 86 | | 3.75 | 49.95 | 53.70 | | 5.99 | .59 | 6.58 |
| 1923 | 2,258 | | 1 | 77 | 78 | | .42 | 32.09 | 32.51 | | .13 | .50 | .63 |
| 1924 | 1,503 | | 2 | 66 | 68 | | 1.11 | 36.50 | 37.61 | | 1.49 | 1.49 | .88 |
| 1925 | 1,256 | 2 | 3 | 181 | 186 | .55 | .83 | 49.89 | 51.27 | 3.31 | 1.27 | 1.15 | 5.73 |
| 1926 | 1,348 | 1 | 6 | 148 | 155 | .25 | .15 | 37.00 | 38.30 | 1.48 | .96 | .48 | 2.92 |
| 1927 | 763 | | 2 | 69 | 71 | | .87 | 30.17 | 31.04 | | 1.57 | .58 | 2.15 |
| 1928 | 942 | | 2 | 84 | 86 | | .70 | 29.70 | 30.40 | | .50 | .60 | 1.00 |

[1] Less than one-tenth of one.

TABLE 5.—ACCIDENT FREQUENCY AND SEVERITY RATES IN THE IRON AND STEEL INDUSTRY, 1922 TO 1928, BY STATE AND YEER—Continued

| State and year | Full-year workers | Number of cases | | | | Frequency rates (per 1,000,000 hours' exposure) | | | | Severity rates (per 1,000 hours' exposure) | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Death | Permanent disability | Temporary disability | Total | Death | Permanent disability | Temporary disability | Total | Death | Permanent disability | Temporary disability | Total |
| West Virginia: | | | | | | | | | | | | | |
| 1922 | 2,702 | 2 | 6 | 592 | 600 | 0.24 | 0.74 | 73.03 | 74.01 | 1.48 | 0.84 | 0.85 | 3.17 |
| 1923 | 9,336 | 8 | 13 | 749 | 770 | .29 | .46 | 26.74 | 27.49 | 1.71 | .54 | .33 | 2.58 |
| 1924 | 4,613 | 7 | 18 | 806 | 831 | .51 | 1.30 | 58.24 | 60.05 | 3.03 | 1.53 | 1.70 | 6.26 |
| 1925 | 7,964 | 13 | 14 | 537 | 564 | .54 | .59 | 22.48 | 23.61 | 3.26 | .67 | .28 | 4.21 |
| 1926 | 14,124 | 12 | 30 | 1,306 | 1,348 | .28 | .71 | 30.87 | 31.86 | 1.70 | .41 | .35 | 2.46 |
| 1927 | 12,414 | 15 | 21 | 1,279 | 1,315 | .40 | .56 | 34.34 | 35.30 | 2.42 | .56 | .56 | 3.54 |
| 1928 | 13,938 | 8 | 39 | 1,874 | 1,921 | .20 | .90 | 44.80 | 45.90 | 1.20 | .80 | .60 | 2.60 |
| Wisconsin: | | | | | | | | | | | | | |
| 1922 | 5,441 | ------- | 20 | 790 | 810 | ------- | 1.23 | 48.40 | 49.63 | ------- | 1.39 | .73 | 2.12 |
| 1923 | 4,264 | 3 | 17 | 708 | 728 | .23 | 1.33 | 55.34 | 56.90 | 1.41 | 1.23 | .78 | 3.42 |
| 1924 | 8,321 | 5 | 47 | 1,275 | 1,327 | .20 | 1.88 | 51.08 | 53.16 | 1.20 | 1.57 | .68 | 3.45 |
| 1925 | 6,089 | 2 | 34 | 1,121 | 1,157 | .13 | 2.18 | 72.02 | 74.33 | .77 | 2.11 | .81 | 3.69 |
| 1926 | 10,481 | 6 | 66 | 1,214 | 1,286 | .19 | 2.10 | 38.66 | 40.95 | 1.14 | 1.76 | .55 | 3.45 |
| 1927 | 3,992 | 4 | 26 | 641 | 671 | .33 | 2.17 | 53.52 | 56.02 | 2.00 | 1.66 | .59 | 4.25 |
| 1928 | 2,604 | ------- | 15 | 595 | 610 | ------- | 1.90 | 76.20 | 78.10 | ------- | 1.30 | .80 | 2.20 |

# INDUSTRIAL AND LABOR CONDITIONS

## Report of National Committee on Calendar Simplification, and Labor's Interest Therein

THE National Committee on Calendar Simplification for the United States was organized at Washington on July 9, 1928, as the result of a suggestion from the League of Nations, to study the question of improving the calendar; to make a comprehensive investigation of the prevailing sentiment on the matter in this country; and to report its conclusions to the Secretary of State for his use in replying to a request of the League of Nations for information desired by the League with a view to calling an international conference to adopt a convention for the reform of the calendar. After a year of investigation, the committee has submitted its report.

The committee was composed of representatives from civil life and from the Federal Departments of Agriculture, Commerce, Interior, Labor, Navy, and Treasury, and the Interstate Commerce Commission. Separate committees were formed to conduct inquiries in the following fields: Industry and commerce; transportation and communication; finance; science, engineering, and technology; labor; education; agriculture; law; journalism and publishing; women's interests; and social, fraternal, and public interests. The committee had desired representation of the religions in its organization, but owing to the difficulty in securing comprehensive representation of all faiths, and the undesirability of partial representation, religious bodies were not identified with the membership.

The labor committee consisted of James J. Davis, Secretary of Labor; Miss Mary Anderson; Roger W. Babson; W. N. Doak; William Green; Thomas Kennedy; Andrew F. McBride; Gertrude McNally, secretary; Joseph P. Ryan; Ethelbert Stewart; and Fred M. Wilcox.

It is understood that committees with functions similar to those of the national committee constituted in the United States have been or are in the process of being formed in Germany, France, Holland, Hungary, Peru, Ecuador, Costa Rica, Panama, and Salvador, and that preparations for the formation of such committees are being made in other countries.

### Defects in Present Calendar

THE fundamental defects in our present calendar, as stated by the committee, are (1) the lack of equality in the lengths of the months; (2) the fact that the months do not contain a whole number of weeks; and (3) the fact that the days of the week shift each year to different dates.

There is a difference of 11 per cent between the number of days in March and the number of days in February. Counting holidays, there may be a difference

of 19 per cent between the number of working-days in March and the number of working-days in February, depending upon how the calendar shifts the days of the week to different dates of the months from year to year. In the sphere of industrial statistics and business accounting an attempt to give a picture of progress by figures comparing the volume of production or other factors for a month which has 27 working-days with those for a month that has only 24 results in distortion unless adjustments are made to correct for the difference in their different number of days. Confusion is also caused by the occurrence in the months of fractional parts of weeks and of some week days five times in the same month. For example, five pay days sometimes occur in the same month; in fact, where concerns pay by the week, there must be four months in every year which have five pay-roll closings. Comparisons of these months with the months which have only four pay-roll closings are bound to be out of line unless adjustments are made. Similar distortions occur in those businesses for which the different days of the week have a varying economic value, such as the hotel business, the laundry business, department stores, the grocery trade, and transportation. Nearly all are affected by the varying number of Saturdays and Sundays in the months.

Workers paid by the week, who pay monthly rents, union dues, installments on houses, furniture, clothing, automobiles, etc., experience incessant financial difficulties, because their weekly earnings do not coincide with these monthly bills. Employees paid by the month or half month, on the other hand, are inconvenienced by having to pay costs of food and other weekly items sometimes four and sometimes five times in different months.

With regard to labor statistics, calendar-caused variations in figures showing the rise or fall of wages and their relation to production, cost of living, and other economic factors are a source of constant trouble to the United States Department of Labor and in the research work conducted by trade-unions. The accuracy of such statistics as showing true conditions is important as being the basis of collective agreements and certain measures for their execution.

Similar difficulties are encountered in other fields.

## Public Opinion on Changing the Calendar

In its attempt to ascertain the prevailing public opinion in the United States on a change in the calendar the committee sent out questionnaires to representative national, State, and local organizations in many different branches of activity, asking whether they favored a change or simplification of the calendar and whether they favored the calling of an international conference to consider the question, the conference not to be committed to any special principle of revision. Information on the principles of the 13-month and equal-quarters plans suggested by the League of Nations was submitted with the questionnaires, and the organizations were requested, if a change was desired, to make a choice between these two plans.

Under the 13-month plan, called the international fixed calendar, there would be 13 months of 28 days each, the new month being placed between June and July. The name Sol, meaning sun, has been suggested as a name for this extra month. The three hundred and sixty-fifth day of the year would be dated December 29 and be observed as an extra Sabbath. It has been suggested that this last day of the year be called "Peace Day" or "Year Day." Leap day would be placed on June 29 and be observed as an extra Sabbath or holiday. Each week would begin on Sunday and end on Saturday. The equal-quarters plan provides for 12 months, 8 with 30 days each and 4 with 31 days each. Names for the extra days, of which there would be one in ordinary years and two in leap years under these plans, have not been chosen and they are now referred to as "blank" days.

The survey showed that a large and representative body of American opinion favored calendar improvement, 1,154, or 80.5 per cent of the 1,433 organizations giving definite replies to the questionnaires, favoring simplification or the participation of the United States in an international conference to consider the question. A choice between the two plans of simplification submitted was made by 488 organizations, the 13-month plan being preferred by 480, or 98 per cent. The participation of the United States in an international conference was favored by 781 out of 952 organizations replying to the question on this point.

The following labor unions are listed in the report as being typical of those which have taken favorable action on calendar simplification:

Brotherhood of Railway and Steamship Clerks.
International Association of Machinists.
International Brotherhood of Bookbinders.
Laundry Workers International Union.
National Federation of Federal Employees.
United Brick and Clay Workers of America.
United Textile Workers of America.

It was found that for years many business concerns have been using private simplified calendars to secure more accurate accounting in their business affairs and that they are practically unanimously in favor of the general simplification of the civil calendar.

The committee feels that "in individual life and among all the processes of civilization, simplification of the calendar would afford relief from unnecessary effort and, thereby, contribute to making our lives easier and happier. It would afford more time for leisure and reflection, and facilitate the conduct of all human affairs."

## Feasibility of Changing the Calendar

IN THE following paragraphs taken from the report the ease with which a change in the calendar could be effected is pointed out:

So accustomed are we to the present calendar, that we endure the unnecessary labor it causes us almost as if it were an unavoidable consequence of some unchangeable order of nature. Yet it is only a human device. Except for the length of the days and the length of the year, it is not astronomically determined. Whenever the people desire it, it can be changed as the calendar has been changed in the past.

After an international conference has approved a plan of simplification and agreed upon a date for putting it into effect, ratifying legislation in the various countries would be next in order. Such legislation would, of course, legalize the change in dates which would be caused by a new calendar and thus take care of maturities of contracts and other legal matters. A simple conversion table legally established would do this.

The temporary inconvenience of change must be weighed against the permanent convenience and advantages of a better calendar to this and future generations. Within the brief period since the war the large populations of Russia, Turkey, and other countries of eastern Europe have accepted without serious disturbance a change in their dates by conforming to the Gregorian calendar. Our own forefathers accepted such a change in 1752, a fact in history that caused so little disturbance that it is scarcely mentioned, and is seldom learned by the ordinary student.

Birthdays, holidays, and other anniversaries would be changed more or less, depending upon the plan adopted. This prospect is a subject of concern to some for sentimental reasons or because of conservatism. It is not unnatural, yet it is an objection to calendar change which the committee is loath to believe would

become insistent when it is unselfishly considered that calendar improvement contemplates benefits not only to this generation, but to those of the future who would be no more concerned over by-gone changes in anniversary dates than we are over changes in anniversary dates made in generations that preceded our own.

George Washington was born on February 11, but we celebrate his birthday on February 22 because of the calendar change in 1752. There is doubt that December 25 is the exact anniversary of the birth of Christ, while we celebrate the resurrection on a day that changes every year. It is not a date we celebrate but a memorial day for an event.

## The Negro in West Virginia

THE report of the West Virginia Bureau of Negro Welfare and Statistics for the biennium 1927 and 1928, which has recently been issued, contains data concerning the general position of the colored population of the State, with special studies of several towns and cities. An estimate based upon the public-school enumeration for 1928 places the number of negroes in the State at 121,144, slightly over one-half being males. A study of counties in which 80.8 per cent of this population lives shows that there were 21.9 births per 1,000, and 10.1 deaths, leaving a natural increase of 11.8 per 1,000. A study of some of the leading causes of death shows that the proportion of deaths from tuberculosis is not far from twice as great among the colored as among the white population; deaths from heart disease are slightly less among the colored; deaths from kidney disease are almost the same; and deaths from pneumonia and from mine accidents are much more numerous proportionately among the colored. The high death rate among the negroes is, it is believed, largely attributable to their economic condition, which involves living in insanitary conditions, with insufficient or unsatisfactory food, bad housing, and the like.

### Industrial Opportunities for Negroes

WITH few exceptions, the negroes are wage earners, the mining industry being the largest employer, 25,335 being employed in or about mines. A study of their work in the mines showed that of 7,621 negroes covered, 2,233 were day laborers and 4,674 were coal loaders, while the remainder included drivers, brakemen, trappers, motormen, machine operators, carpenters, and one fire boss. In the mines, apparently, if they are employed at all, no discrimination is made against them in respect to occupation.

In an attempt to find what industrial positions are open to them the director of the bureau sent out 700 questionnaires to employers, including 250 to mine owners. Replies were received from 150 mine operators and 238 employers in other industries. Only 64 of the heads of general industries employed negroes, against 110 of the mine owners. Sometimes the failure to employ negroes seems to arise from a misunderstanding of the situation rather than from prejudice, as shown by the following incident:

> We visited one of our largest industrial plants which had just started on a $3,500,000 job of improvement. We had been informed that no negroes would be employed. The superintendent of construction informed us that employees were not known by their color in his plant, but they were only known by their number assigned to them. He made this fact known and the result was the employment of 700 or 800 negroes on the job, and I am informed that about 300 still remain with the company.

A survey of the occupations of colored people in Charleston and Huntington shows that they are scattered through most industries, laborers and domestics leading in number, but manual and mechanical occupations having a full representation. In both of these cities, and in Beckley, which was also surveyed, negroes are represented in the professions, teachers and ministers leading, physicians coming next, and dentists, lawyers, nurses, and pharmacists being found in lesser numbers. A number, also, are in business. In Charleston, negroes own 68 enterprises, ranging from barber shops and restaurants to a wholesale produce business, while in Huntington there are 59 and in Beckley 35 such enterprises. The suggestion is made that while some of these are "well stocked, efficiently manned, and rendering efficient service," there are too many small businesses.

If possible, several of the smaller business establishments should unite either in partnerships or corporations. This would enable them to cut down overhead expenses and render better service to the patronizing public. Negro business men should do more advertising to increase the volume of their business.

In general, it is suggested that it would be well for negroes to engage more extensively in business, and that they should fit themselves to do it effectively.

The time has come when negroes must begin to establish industries of their own. They must be willing to enter the field with the expectation of meeting keen competition. We see no reason why negroes should not form corporations to engage in the following business enterprises: Laundry, manufacture of working garments, auto mechanics, broom making, fruit and vegetable canning, and the manufacture of brick, tile, and cement blocks.

### Negro Farming in West Virginia

In 1925 the negro farming population of the State amounted to 4,474. In general, there is much room for improvement in their condition. A report published under the auspices of the State department of agriculture gives the following statement of their situation:

Many of the colored farmers have rough hill land with a shale soil surrounded by fertile soil with limestone foundation. Successful farming requires good judgment in choosing a farm and in deciding on the type of farming. The colored farmers, with their limited area of rough, thin, hill land, attempt the same type of farming as engaged in by his white neighbor, who has broad acres of limestone soil, well adapted to fruit, grain, and grazing. If the colored farmers are to succeed, they must adapt their crops to suit the soil and the climate. * * *

Eighty per cent of the farmers were satisfied with farm life and preferred farming as a mode of living, but said if they did not engage in some other work part of the time they could not make ends meet. Part of the reason for this is that none of these farmers have any system of rotation of crops, and therefore the available supply of certain elements is reduced and finally disappears almost wholly.

To meet this situation the State agent in charge of extension work in agriculture and home economics is carrying on a vigorous campaign, including camp schools, training meetings, short courses, and conferences on rural and country life. Fifty communities have adopted a definite program of work; corn, wheat, and oats demonstrations have been carried out; 620 young people are enrolled in junior home demonstration work; and in adult home demonstration work 417 are enrolled in clothing, home management, house furnishing, and beautification of home grounds.

The suggestion is made that, since at least 75 per cent of the negro population is located in the industrial centers, more attention should be paid to gardening and to small truck farms, which are often available in connection with other employment. Most of the coal operators, it is stated, permit their employees to cultivate all the land they wish free of charge, and a few of the negro miners have taken advantage of this to do intensive farming on a small scale during their leisure time.

## Work of International Educational Cinematographic Institute

A RECENT communication from the manager of the International Educational Cinematographic Institute of the League of Nations states that among the subjects being studied with particular care "range the labor questions and the means offered, with the help of the cinematograph, for the systematic and organic development of professional and vocational training and of the scientific organization of labor."

The institute also gives its attention to the problems concerned with the utilization of human energy as a factor in labor, which, notwithstanding the great development of mechanical technique, still remains the central element of work; the physiology of work; inquiries upon physical fatigue; individual and collective automatism; industrial and technical psychology; production; and protection against labor risks and accidents.

The International Educational Cinematographic Institute was founded in Rome, Italy, on the initiative of Premier Mussolini, and at the meeting of the Council of the League of Nations held on August 30, 1928, in Geneva, Rome was chosen as its seat. It is collaborating with the International Labor Office and with the International Institute for the Scientific Organization of Labor, the latter body having delegated to it the task of collecting and classifying all of the information existing throughout the world "concerning the problem of the cinematograph as applied to the system of the organization of labor." The publication of a monthly journal was begun by the institute in July of this year, being issued in five editions—English, French, Italian, German, and Spanish.

The institute wishes to get in touch with the press which specializes in the subjects in which it is interested, for the purpose of obtaining news and information for use in its work, and also desires "to be informed of the opinions of the big manufacturers and all those who are interested in labor questions regarding the cinematograph and to know to what extent they value this auxiliary force."

## Report of British Economic Mission to Australia

AT THE request of the Australian Government, the British Government appointed a mission consisting of four independent business men who were instructed "To confer with the Commonwealth and State governments, with the Development and Migration Commission, and the leaders of industry and commerce in Australia on

the development of Australian resources and on any other matters of mutual economic interest to Great Britain and the Commonwealth which may tend to the promotion of trade between the two countries and the increase of settlement in Australia."

The members of the mission sailed at the close of August, reached Australia on September 25, 1928, and spent approximately three months studying the situation, visiting different parts of the Commonwealth, and conferring with "Governments and their officials, with representative public bodies, with labor organizations, and with associations of producers and traders of every kind concerned both with primary and with secondary industries. In addition we have, as individuals, met and conferred with many of the leading citizens of the Commonwealth."

The greater part of the report is concerned with financial and economic questions. The present position of Australia, they find, is sound in that her national income and sources of public revenue are amply sufficient to pay for her Government and to provide interest and amortization on her public debt. Nevertheless, she has spent too much unprofitably on development schemes which have been undertaken without sufficient regard to their probable financial and economic results or without sufficient preliminary investigation of the schemes themselves. The members of the mission consider the risk of borrowing for development purposes so great that they suggest the propriety of the Government's leaving this field to private enterprise, or, at least, inviting private enterprise to enter it to a larger extent than has been customary in the past. Such a curtailment of public expenditures must involve some deflation, but this, the mission thinks, is inevitable, and need not be serious or lasting, since the State is still borrowing well within her actual and potential resources. Meanwhile, it is urged, public accounts should be prepared and published in such a form that it may be easy to understand exactly what is the exact financial position of each State or Commonwealth undertaking.

Immigration receives attention. The general situation in Australia does not at present attract immigrants, but much is being done to promote the coming of young people, children, and women for domestic service especially. In this connection, the more intensive use of land already in occupation is urged.

The tariff situation is discussed at considerable length. Australia has definitely adopted a protective policy, and this the mission members do not criticize, but they suggest that such a policy involves certain sacrifices, which it is well to face, and that there are difficulties in the way of carrying it out. There is danger of giving excessive or too prolonged protection to infant industries and of protecting inefficiency in management and administration. Efficiency might well be made a condition for protection, and to secure this full publicity might be required.

A further condition of protection should be that every recipient of it should be liable at any time to be called upon to furnish the Government with the fullest information as to the cost of his products, the prices at which they are sold, and the conditions of his industry generally. The recipient of protection is obtaining a benefit from the public and should be required in return to give to the trustees for the public all the information necessary to enable them to satisfy themselves that the benefit is not being abused.

As a further step in this direction, it is suggested that a full scientific inquiry and investigation into the tariff be made by the Government, and that while this is in process there should be no avoidable increase of duties.

### Industrial Legislation

THE effects of the protective tariff and of the wages and working conditions fixed by decisions under the arbitration acts are so intimately interrelated that, although not specifically instructed to do so, the mission consider some discussion of the subject necessary. Having sought the views of both workers and employers in every capital city of Australia, they have found a widespread opinion that "the arbitration courts are not achieving their purpose and that a system designed to arrive by judicial decisions at fair and prompt settlement of industrial disputes such as could be freely accepted by both sides must be held to have failed."

The most important of the reasons which have been advanced for this view are that experience has shown that there arises between the two parties who appear before the arbitration court judge or arbitrator the spirit of antagonism inseparable from litigation, and that the object of prompt settlement is defeated by the delay occasioned by the necessity for the collection and presentation of detailed evidence in a form acceptable to a court. It is complained that the procedure of the court occasions the expenditure of much time and money by the litigants and involves very long absences from their ordinary occupations for a large number of persons whose time might be more profitably employed; that the subject matter of the questions which are brought before the courts is not of a nature with which judicial tribunals, necessarily unversed in the practical problems of industry or in the economic questions to which they give rise, are best fitted to deal; and that the overlapping jurisdictions of the Federal and State arbitration courts have led to an almost inextricable tangle of conflicting decisions so complicated that large staffs have to be maintained to keep track of them and to endeavor to guard against involuntary contravention of any of them in the course of every day business.

The mission hold that a change in the system is essential, that there should be a minimum of governmental and judicial interference with the relations of employed and employer, and that industrial disputes should be settled by discussion and frank interchange of views between the parties concerned.

The theory of the basic wage, rising or falling with a varying index figure of the cost of living, is viewed with equal disfavor, as tending to deprive employees of any interest in the prosperity of the industry employing them.

Let us assume that by better, more energetic and more willing work on the part of all concerned from the highest to the lowest, the output of Australian industries were increased with no increase in overhead cost. The natural economic effect would be that prices all round would fall and that consumption and profits would rise; but as the cost of living would fall the basic wage would also fall, and with it all wages fixed by the arbitration courts in relation to the basic wage with margins for special skill and the like. Thus the system is such as to give the worker in industry no interest in a cheaper cost of living, and no inducement to that increased efficiency which would bring it about.

A supplementary report deals with a number of questions, such as transport, taxation, banking, and other subjects, concerning which rather brief memoranda are presented.

## Committees of Inquiry into the Textile and the Iron and Steel Industries of Great Britain

IN ITS issue for August, 1929, the Ministry of Labor Gazette announces the appointment of committees of inquiry into the whole situation of these two industries, as follows:

The Prime Minister has appointed two subcommittees of the committee of civil research to inquire into the cotton and into the iron and steel industries, respectively.

The terms of reference of the cotton subcommittee are as follows:

"To consider and report upon the present condition and prospects of the cotton industry, and to make recommendations as to any action which may appear desirable and practicable in order to improve the position of that industry in the markets of the world."

The members of the subcommittee are: Right Hon. William Graham, M. P., president of the Board of Trade, chairman; Right Hon. A. V. Alexander, M. P., First Lord of the Admiralty; Sir Alan G. Anderson, K. B. E.; Mr. Joseph Jones; Sir William McLintock.

The terms of reference of the subcommittee for the iron and steel industry are identical, except for the industry named, and the members are Right Hon. Lord Sankey, Lord Chancellor, chairman; Right Hon. Thomas Shaw, Secretary of State for War; Sir Cecil L. Budd; Mr. C. T. Cramp; and Sir William Plender.

## Creation of Government Advisory Industrial Commission in Mexico

A COMMISSION to study industrial questions and to act in an advisory capacity to the Federal and State Governments is to be created in Mexico, according to a communication from the American consul general, William Dawson, at Mexico City, dated May 21, 1929.

In considering matters referred to it, the commission is to be composed of a representative of the Ministry of Industry, Commerce, and Labor, who shall act as presiding officer, and representatives of the following ministries and departments when, due to the nature of the subject under discussion, they may be interested or able to contribute to a solution: Ministry of Finance and Public Credit; Ministry of Interior; Ministry of Agriculture and Development; Ministry of Communications and Public Works; Department of the Federal District; Department of Public Health; Department of Manufacturing Establishments and Military Supplies; and the Controller's Office.

An interested individual or his representative may attend the meetings of the commission, as may also representatives of an interested industrial group, chamber of commerce or federation; such persons, however, shall not have a vote.

The Ministry of Industry, Commerce, and Labor will issue regulations govering the work of the commission and, with the cooperation of the other departments, will provide the necessary personnel and quarters.

# PRODUCTIVITY OF LABOR AND INDUSTRY

## An Analysis of Labor Costs in Japan

IN JAPAN industrial labor is neither very plentiful nor very cheap, according to an article in the Political Science Quarterly for June, 1929.[1] This is explained on the ground that although the agricultural districts are overpopulated, the recruiting of labor for the textile industry, which demands many woman and child workers, has been a great problem. Numerous cotton mills have been located in farming districts because of their labor supply, but ordinarily there are not enough local workers to operate these factories, and labor has had be be brought from other sections to the mills.

Despite the fact that the process of industrialization has been going on in Japan for three-quarters of a century, the matter of an industrial labor supply is still a very serious problem. The service period of recruited workers, who are nearly all girls, is short. They go back to their country homes as soon as they have earned enough to offset the amount advanced to their parents, or have saved an amount sufficient for a dowry, or have worked out their contract or otherwise met their mill obligations. Labor in Japan must be recruited not only when a mill begins operations but again and again thereafter to keep the plant going. The Government Bureau of Social Affairs reports that the labor turnover for 1925 was as follows: In textile mills, 58 per cent; in engineering, 42 per cent; in the chemical industry, 35 per cent; and in miscellaneous industries, 65 per cent.

Unemployment has been a serious problem in Japan only in very recent years, when the industries, overexpanded under the stimulus of exceptional war and postwar conditions, have found themselves overmanned for present industrial conditions. That the unemployment situation has not been more critical is due to the fact that many factories have made use of their high labor turnover, instead of widespread dismissals, to cut down their labor force. Recruiting has temporarily slackened.

### Wages

THE following table gives Government wage data for 1926, including an allowance for the semiannual bonus. These figures represent the average wage cost per worker per working-day rather than the wage from the worker's viewpoint. The report under review states, however, that in such averages the extremes exercise too great an influence for their numbers, and that, moreover, in these figures no allowance is made for the individual's lost time or for minor personnel changes. In 1926 the average wage cost of male workers

[1] Political Science Quarterly, New York, June, 1929, pp. 215–258: An analysis of Japan's cheap labor, by Dorothy J. Orchard.

ran from 78 cents to $1.64 per day and for woman workers from 37 to 65 cents per day.

TABLE 1.—AVERAGE DAILY MONEY WAGE OF WORKERS (INCLUDING WAGES AND BONUSES AND CASH ALLOWANCES) IN JAPANESE INDUSTRIES IN 1926

| Industry | Number of factories | Males | Females | Average |
|---|---|---|---|---|
| Ceramics | 51 | $1.17 | $0.49 | $1.08 |
| Metals | 57 | 1.42 | .57 | 1.37 |
| Machine and tools | 112 | 1.41 | .65 | 1.37 |
| Chemicals | 61 | 1.01 | .46 | .84 |
| Textiles | 215 | .78 | .47 | .54 |
| Paper | 30 | .93 | .45 | .84 |
| Fur, bone, horn, and feathers | 5 | 1.64 | .63 | 1.62 |
| Wood and bamboo | 24 | .97 | .45 | .92 |
| Food | 79 | .99 | .46 | .86 |
| Clothing | 17 | .90 | .50 | .64 |
| Building | 2 | 1.61 | .37 | 1.48 |
| Printing and binding | 30 | 1.01 | .55 | .93 |
| Ornaments | 4 | 1.19 | .51 | 1.10 |
| Electricity and gas | 7 | 1.18 | .62 | 1.17 |
| Miscellaneous | 3 | 1.09 | .52 | 1.06 |
| Total | 697 | 1.17 | .48 | .85 |

Table 2, below, gives a better idea of wage levels from the viewpoint of the individual worker. The data were secured by visiting 59 factories in 1926.

TABLE 2.—TYPICAL DAILY WAGES (NOT INCLUDING BONUS ALLOWANCES) IN JAPAN, JUNE-OCTOBER, 1926

| Industry | Number of factories | Male | | | Females | | |
|---|---|---|---|---|---|---|---|
| | | High | Low | Usual | High | Low | Usual |
| Ceramics | 11 | $2.00 | $0.25 | $1.25 | $2.00 | $0.25 | $0.50–$0.90 |
| Copper mining and smelting | 2 | 3.50 | .60 | 1.00–1.25 | .65 | .25 | .40–.45 |
| Engineering | 3 | 6.00 | 1.00 | 1.50–2.00 | ------ | ------ | 1.25 |
| Electrical appliances | 3 | 5.00 | .50 | .88 | .84 | .30 | .60 |
| Hardware | 3 | 1.75 | ------ | 1.00–1.30 | ------ | ------ | .40–.65 |
| Glass | 3 | 2.50 | .50 | 1.50 | 1.00 | .50 | ------ |
| Rubber | 2 | ------ | ------ | 1.00–1.25 | ------ | ------ | .75–1.00 |
| Matches | 2 | ------ | ------ | .75 | ------ | ------ | .40 |
| Raw silk | 9 | ------ | ------ | ------ | 1.30 | .125 | .45–.75 |
| Cotton spinning | 3 | 1.50 | .40 | .75–.90 | 1.25 | .30 | .60 |
| Cotton weaving | 4 | 1.50 | ------ | .65–.70 | 1.00 | .50 | .50–.70 |
| Wool spinning and weaving | 2 | 3.70 | ------ | .75–.90 | 3.70 | .30 | .75–.90 |
| Printing and dyeing | 4 | 3.00 | .50 | .75–2.40 | .75 | .35 | ------ |
| Paper | 2 | 2.00 | ------ | .60–.90 | ------ | ------ | .40 |
| Shoya brewing | 1 | 1.75 | .45 | .95 | .65 | .38 | ------ |
| Brushes | 3 | ------ | ------ | 1.25 | 2.00 | ------ | .75 |
| Coal mining | 2 | ------ | ------ | 1.15–1.30 | ------ | ------ | ------ |

In 1926 in the cotton-spinning industry the ordinary daily wage for a girl spinner was approximately 60 cents, exclusive of the semiannual bonus which would make but a few cents difference in the wage per day. According to Government wage statistics, however, the average wage per day per female in cotton spinning for April, 1926, was 39 cents. This discrepancy, the author thinks, shows the weakness of the average wage. The 60 cents represents the usual pay of a large group of workers for each day of labor in the plant.

A girl going into a cotton mill for the first time can expect to earn about 30 cents a day. After she has been there a while, she may look forward to earning

60 cents a day. If she stays a long time and becomes quite skilled, she may advance to $1.25 a day. The 39 cents is an average of the pay of all the classes of cotton-spinning workers for the 27 days the factories were running in April, 1926. It includes the high and the low, the skilled and the unskilled, of the female workers. On this basis a mill owner pays, on the average, about 40 or 50 cents a day per girl worker. The equivalent wage per female worker in the cotton industry of the United States averaged, in 1926, from $2.09 to $4 a 10-hour day, or between five and eight times the Japanese wage.

In the Japanese cotton mills the men do only the heavier and more highly skilled work, most of the labor being performed by women. A man qualifying for a job in a cotton mill could expect to earn from 75 cents to $1 a day. In April, 1926, the average daily wage for males, including an allowance for bonus grants, was 78 cents.

An average girl working in the raw silk industry in Japan may expect to earn approximately 60 cents in 11 hours—the prevailing day in that industry. Beginners earn as little as 12½ cents per day, while the highly skilled may earn $1.30 per day. In 1926 the average daily wage for female operatives was approximately 35 cents.

At present, actual wages differ from what they were in 1926. The wage index of the Japanese Department of Commerce and Industry, covering 13 of the Empire's principal cities, shows only slight variations in the wage levels in the past two years. In general, daily wages may be said to run from 30 to 80 cents for women and from 50 cents to $2 for men. It is pointed out, however, that these figures must be considered both in relation to cost of living and to aggregate labor costs.

In most mills in Japan the direct labor costs include various items besides the wage.

In an investigation by the Government bureau of statistics in October, 1924, including 74 per cent of all the factory workers and covering 7,000 factories of from 54 to 227 workers but excluding the larger textile mills, it was found that 46 per cent of the factories provided board and lodging, 25 per cent provided clothing, and 3 per cent gave rice to their employees in addition to their wages. Others provided either board only, or lodging only.

### Wages and Cost of Living

A COUNTRY girl, fresh from the farm, beginning work in a cotton mill is paid a wage of 30 cents per day and is lodged free or partially free in the dormitories of the company. Her food, which she takes in the dining hall, costs her about 9 cents per day, which is less than the company pays for it. She receives no wage on holidays, rest days, or days when she is sick, but, of course, the company charges her for her food whether or not she is working. In consequence she has only about 16 cents per day for her other expenses,[2] including clothing, carfare, the payments on the loan to her parents, and savings for a dowry. The girl cotton-mill operatives, whose wages are 60 cents per day are, of course, better off. The male textile workers are paid higher wages, but they provide their own food and lodging, and frequently have family responsibilities.

In general, wages are higher in the engineering trades, but the worker receives fewer indirect payments for his labor and his remuneration is still low in relation to living costs. If the daily cost for food per worker is estimated at 15 cents, which is the amount allowed in

[2] Estimated on the basis of 306 working-days per annum.

the budgets of the large textile mills, a man who earns $1 per day of labor must spend 17 per cent of his income for food.[3]

The majority of the workers in Japan are receiving low wages because so many of them are untrained and unskilled. It can not be denied that the individual laborer is cheap but, according to the author, the matter to be considered is not Are wages low? but Is the collective cost of labor low?

## Labor Costs

By means of the dormitory system the workers' various needs are met under the company's supervision. In addition to board and lodging a girl may complete her compulsory educational requirements under company teachers.

Since the workers are locked behind the factory gates, for their own and the company's good, they must make all their purchases at company stores; patronize company hairdressers, an important part of the Japanese girl's toilet; bathe at the company baths; be attended by the company doctor; in fact, supply all their necessities and pleasures from the company sources. For most of these things the workers pay in full, but the organization is provided by the company and it constitutes a heavy and unwieldy overhead expenditure that must go on whether business is good or bad and that can not be contracted except after considerable delay and probably some loss.

Manufacturers in Japan have a very unusual labor cost in the form of the discharge allowance which the worker expects regardless of the cause of dismissal. There is apparently a somewhat general realization of the responsibility of industry to the worker for his job and the latter's right to be indemnified for its loss. Under the 1923 factory act employers must give "14 days' notice of discharge" or 14 days' pay. The practice of granting dismissal allowances, however, "is quite outside the provisions of that act." The amounts of such allowances vary not only from year to year but from mill to mill. After the 1927 financial depression the Kawasaki Dockyards in Kobe were obliged to lay off 3,000 men, to whom the company paid a total of $250,000 in dismissal allowances. In the same year $458,000 was paid in discharge allowances to 700 men dismissed by the Yawata Iron Foundry in Kyushu. The individual discharge allowances ranged from $65 to $2,000, and averaged over $650. Moreover these men were paid the ordinary year-end bonus.

Dismissal allowances are paid even to men discharged for strike activities. In 1927 the Dai Nippon Spinning Co. agreed to pay $10,900 as a discharge allowance to 88 workers dismissed for such cause.

The famous strike of the Noda Shoyu Brewing Co. lasted 217 days, the longest strike in the history of Japanese labor, and there was much bitterness on both sides. It was finally lost by the strikers, but the company paid $190,000 as discharge allowances to the dismissed strikers. The number of strikers dismissed in the course of the strike was 1,047. Of these 300 were reinstated and the remaining 747 were given more than $200 each on the termination of the strike. The rest of the sum, about $40,000, was to go to the strike fund of the union, though the company refus d to recognize that union.

The Japanese industrialist's cheap wages must therefore be supplemented in various ways. It is estimated that the semiannual bonus increases the direct wage 5 to 30 per cent, the recruiting system and labor turnover add another 8 to 12 per cent, and the dormitory

[3] On basis of 325 working-days per annum, in engineering trades.

system and its accompanying facilities amount to from 20 to 50 per cent more. It is not known to what extent these charges are increased by the actual sums distributed in dismissal allowances or the alternative expense of maintaining the whole personnel in periods of depression, but it is estimated that "the cheap Japanese labor must cost somewhere from 33 to 92 per cent more than is apparent in the money wage."

The author admits that the data upon which these estimates are based are incomplete and that very little is actually known concerning the problem as a whole, even by the Japanese industrialists themselves. "All that can be safely said of the cost of the cheap wage system is that it is greater than is immediately apparent and probably by a considerable amount."

## Hours of Labor

BASED on the Japanese census of labor, of October, 1924, the daily hours of labor of factory workers in Japan were as follows:

TABLE 3.—CLASSIFIED HOURS OF WORK PER DAY IN JAPANESE FACTORIES, AND THE PERCENTAGE OF OPERATIVES WORKING EACH CLASSIFIED NUMBER OF HOURS

[From the census of labor, October, 1924]

| Industry | Total number of workers | Per cent of operatives working— | | | | | |
|---|---|---|---|---|---|---|---|
| | | Less than 8 hours | 8 to 9 hours | 9 to 10 hours | 10 to 11 hours | 11 to 12 hours | 12 to 14 hours |
| Ceramics | 49,990 | 14.4 | 40.2 | 34.8 | 9.7 | 0.7 | 0.2 |
| Metals | 74,088 | 19.0 | 55.8 | 16.8 | 7.9 | .4 | .1 |
| Machine and tools | 202,996 | 24.5 | 63.8 | 11.0 | .5 | .1 | .1 |
| Chemicals | 58,241 | 16.3 | 40.2 | 29.1 | 13.8 | .6 | ..... |
| Textiles | 735,713 | .2 | 1.4 | 25.1 | 41.1 | 30.6 | 1.6 |
| Paper | 27,812 | 4.4 | 5.6 | 19.9 | 68.8 | 1.3 | ..... |
| Food | 69,162 | 11.4 | 71.5 | 9.8 | 6.8 | .5 | ..... |
| Clothing | 25,770 | 5.9 | 46.3 | 33.5 | 13.3 | .8 | .2 |
| Printing and binding | 32,789 | 27.1 | 20.1 | 51.2 | .5 | 1.0 | .1 |
| Other industries | 49,728 | 9.8 | 46.1 | 29.5 | 12.3 | 2.2 | .1 |
| Total | 1,326,289 | 8.1 | 23.9 | 23.0 | 26.8 | 17.3 | .9 |

A provision of the factory act amended in 1923, which became effective in 1926, set the limit of the working hours of women and persons under 16 years of age at 10 to 11 per day, instead of 12 to 14 hours allowed under the act of 1911. "The general principle established was for 10 hours of labor and 11 hours' attendance." Exceptions, however, were allowed for the textile industries up to August, 1931.

Sundays are not automatically days of rest in Japan. The law requires that women and persons under 16 years of age be given four days of rest a month in factories operating day and night with two shifts of labor, and in other factories two days of rest per month. Rest days and working hours for adult males are not regulated by law.

In cotton-spinning mills which operate at night there are usually four rest days per month; in raw silk filatures, in which no night work is done, there are ordinarily two rest days per month. In the cotton-spinning industry the individual works 60 hours a week; in the raw

silk industry, 66 hours some weeks and 77 hours other weeks, averaging 71½ hours per week.

In other industries the length of the work week varies from 48 to 84 hours. The 48-hour week, however, prevails in only a very few industries. After June 30, 1929, the work of women and children under 16 years of age will be restricted to the hours between 5 a. m. and 10 p. m., with a provision for extending the work until 11 p. m. This restriction will reduce the working-day of the machinery 15 per cent. The spinning manufacturers, however, are planning, in accordance with the provision of the factory act, to cut the rest periods of their workers from four days and nights to two days and nights per month. "Thus the work week for the machinery will be 110½ hours instead of 120 hours and the actual curtailment due to the abolition of midnight work will be less than 8 per cent."

Since May, 1927, the members of the Japan Cotton Spinners' Association have added another 10 per cent to their spindleage capacity and June, 1929, will find the cotton-spinning industry with an additional 28.5 per cent productive capacity with which to meet a curtailment of 8 per cent in working hours. The productive capacity of the industry without benefit of midnight labor will be at east 54 per cent above the 1919 level.

Moreover, the author holds that it is highly probable that the eight per cent reduction in the working hours of the machinery will be offset by increased efficiency.

In this connection reference is made to an experiment in abolishing the midnight shift by the Toyo Spinning Co. in a factory near Tokyo. After a trial of 12 months, sickness among the operatives was substantially reduced; the workers no longer had pale, swollen faces; absenteeism and labor turnover diminished; the number of spindles operated per spinner rose; and the quality of the output improved.

### Efficiency of Japanese Labor

IN JAPAN, according to the article under review, many persons are required to do the work of one. The factories are crowded with operatives. Machinery production is emphasized by the mill owners. A labor reserve equal to 10 to 30 per cent of the working force is retained on the cotton-mill pay rolls in order to insure full-time top-speed machine operation. "Industry is organized to get the most out of the individual machine." The writer contends, however, that "more than any other item in the total labor costs in Japanese mills, this matter of the large labor force nullifies the advantages of the cheap individual wage." The labor situation in the United States, the author points out, is quite the reverse, the wages of the individual being comparatively high, "and the system is to utilize the machinery for the maximum production from the worker."

Attention is also called in the report to certain differences in the industries of the two countries; for example, the raw material is not the same. While the Japanese use some United States raw cotton, most of their cotton is from India and being of shorter staple is more easily broken and wasted. It takes more labor to put it through the machine, and the yarn spun, having more of the coarser counts, also calls for more labor. A great deal of the machinery in the spinning mills is out of date, but is "run somewhat faster than American practice by adding more labor. But except for the raw material,

and that too in part, all of these factors are in some way related to the cheap labor policy of the management."

On 30-count yarn the Japanese spinner will ordinarily tend not over 450 spindles though a highly efficient operative might tend 600. On the same yarn six United States factories averaged respectively 750, 1,056, 1,120, 1,344, 2,500, and 2,688 spindles per spinner. United States spinners' wages average from 4½ to 5⅓ times the Japanese spinners' wages. While in some Japanese mills the organization on a labor basis approaches very closely the American standards of efficiency, the greater number of the mills in Japan waste labor. They use from 2½ to 5⅔ times as many workers per 1,000 spindles, the average being considerably over three times the United States labor requirement. The yarn output per operative in a southern mill for a day of 10 hours is from 2¼ to 4⅓ times the yarn output per Japanese mill operative in the same period of time. On the average, the spinning mills of Japan use almost three times the amount of labor actually needed for the same output in the United States.

The American worker receives a daily wage that is about four times the average Japanese wage for the same length of day. With three times the output and four times the wage, American wage costs per pound of yarn average only 39 per cent greater than the Japanese. There are American mills that produce yarn at a lower wage cost per pound than Japanese mills making the same grade of product. The range is from 200 to 76 per cent of the Japanese wage cost. It is no safe margin for the Japanese to bank on for the future, especially if other labor costs are added. The addition of even 33 per cent, the low estimate of extra labor costs, would reduce the margin of advantage to a very unsafe amount.

The data for Table 4, below, were obtained from North Carolina, South Carolina, and Georgia cotton spinning mills the product of which is more closely comparable to the product of Japan; and from the published report of the Japan Cotton Spinners' Association for March, 1925. The Japanese basic data were for individual companies, and the United States figures for individual plants; comparisons are based on the average count of yarn spun. While this is conceded to be an unsatisfactory basis so far as the character of the product is concerned, the author thinks that it is of use in pointing out the essential differences in efficiency.

TABLE 4.—INDEX OF WAGE COSTS AND EFFICIENCY OF LABOR IN COTTON-SPINNING MILLS IN JAPAN AS COMPARED WITH THE UNITED STATES

[United States=100]

| Item | Average count of yarn spun | | | | | Average |
|---|---|---|---|---|---|---|
| | 13 to 16 | 17 to 17.6 | 18 to 19.7 | 23 to 23.7 | 32 to 36 | |
| Ratio of workers to machinery (per 1,000 spindles) | 250 | 250 | 272 | 229 | 566 | 313 |
| Output per spindle per 10-hour day | 105 | 98 | 105 | 107 | 147 | 112 |
| Output per worker per 10-hour day | 44 | 38 | 41 | 42 | 23 | 38 |
| Average wage per 10-hour day | 26 | 25 | 27 | 25 | 25 | 26 |
| Wage cost per pound of yarn | 64 | 71 | 68 | 60 | 116 | 76 |

The comparison which follows is between weaving mills in Japan and those in North Carolina:

TABLE 5.—INDEX OF WAGE COSTS AND EFFICIENCY OF LABOR IN COTTON-WEAVING MILLS IN JAPAN AS COMPARED WITH NORTH CAROLINA[1]

[North Carolina=100]

| Item | Average count yarn consumed | | | | | Average |
|---|---|---|---|---|---|---|
| | 14 to 14.8 | 16 to 18.7 | 19 to 22.6 | 27 to 28.7 | 28.9 to 40 | |
| Ratio of workers to machinery (per 100 looms) | 639 | 625 | 911 | 800 | 666 | 728 |
| Output per loom per 10-hour day | 72 | 61 | 77 | 126 | 88 | 85 |
| Output per worker per 10-hour day | 15 | 12 | 10 | 23 | 14 | 15 |
| Average wage per 10-hour day | 19 | 18 | 18 | 20 | 18 | 19 |
| Wage cost per pound of cloth | 148 | 141 | 233 | 121 | 142 | 157 |

[1] Based on data obtained from the report of the Japan Cotton Spinners' Association for 1925, in Japanese; and correspondence with nine weaving mills in North Carolina. The average wage used for American mills is based on data in U. S. Bureau of Labor Statistics Bul. No. 446, and is the average of the principal occupations in weaving mills in North Carolina for 1926. The data are for individual companies in Japan and individual mills in North Carolina.

In summarizing her conclusions the author says: "Since the wage costs on American yarns average 39 per cent more per pound of yarn than the Japanese, and the wage costs on American cloth (not including the labor costs in the yarn) average 33 per cent less per pound of cloth, the one nearly balances the other." This, she holds, explains why American textile manufacturers can sell in the same international markets with the Japanese. According to the writer, the higher efficiency of the workers in the United States largely cancels any advantage the Japanese manufacturer may derive from lower wages and when the additional labor costs that accompany the cheap labor system are taken into consideration, the Japanese manufacturer "is found to benefit very little, if any, by his so-called cheap labor."

## Coal Production in Illinois, 1918 to 1928

THE following figures concerning production in the Illinois coal mines are taken from the Forty-seventh Coal Report of that State, for 1928:

NUMBER OF MINES OPERATED, MEN EMPLOYED, DAYS WORKED, AVERAGE TONS PER DAY, AND AVERAGE TONS PER MAN PER DAY, 1918-1928

| Year | Mines operated | Men employed | Average days worked | Tons produced | Average tons per day | Average tons per man per day |
|---|---|---|---|---|---|---|
| 1918 | 966 | 91,370 | 183 | 89,978,775 | 491,687 | 5.4 |
| 1919 | 937 | 90,897 | 160 | 75,099,360 | 469,371 | 5.2 |
| 1920 | 938 | 88,102 | 159 | 73,920,453 | 464,909 | 5.3 |
| 1921 | 1,035 | 95,723 | 152 | 80,121,948 | 527,118 | 5.5 |
| 1922 | 1,133 | 98,681 | 134 | 63,276,827 | 472,215 | 4.8 |
| 1923 | 1,136 | 103,566 | 146 | 75,514,095 | 517,220 | 5.0 |
| 1924 | 1,032 | 99,765 | 140 | 72,308,665 | 516,490 | 5.2 |
| 1925[1] | 913 | 76,697 | 204 | 103,186,166 | 505,815 | 6.6 |
| 1926 | 921 | 77,732 | 131 | 69,813,255 | 532,925 | 6.9 |
| 1927 | 906 | 78,572 | 119 | 46,949,700 | 394,535 | 5.0 |
| 1928 | 857 | 65,508 | 132 | 56,211,082 | 425,841 | 6.5 |

[1] From July 1, 1924, to Dec. 31, 1925.

# WOMEN IN INDUSTRY

## Place of Women in the Agricultural Cooperative Movement

THE results of a study of the part played by women in agricultural cooperation, made by the International Cooperative Women's Guild and based upon the returns from a questionnaire sent to 100 central cooperative organizations in 39 countries, are given in the July, 1929, issue of the Review of International Cooperation. Information was received from 38 agricultural organizations in 25 countries.

### Women's Importance in Agriculture

DATA published by the International Labor Office are cited to show that in almost all countries women's labor in agriculture is important and in many it is indispensable. "Australia, where only 2 per cent of the agricultural workers are women, is a notable exception, and in other countries where agriculture is highly specialized and mechanized, and farms are large-scale enterprises, the proportion of women workers tends to be low, and the women are engaged in the subsidiary rather than the main departments of farm work." Poultry farming, for instance, is one of the departments in which women are very important, in fact, in some places it is virtually monopolized by women. On the other hand, where small-scale cultivation is the rule, women are accustomed to all kinds of farm labor, and are often landholders and farmers on their own account.

In Germany in 1921 there were 5,000,000 women working on the land, constituting 48 per cent of the whole number so employed; some 14 per cent of the landholders were women. In Bulgaria, Estonia, and Lithuania women form the majority of farm workers, and in Czechoslovakia and in Belgium about one-sixth of the "occupiers." In Russia dairying, poultry farming, hemp and flax production, the gathering of berries, mushrooms, and herbs are operations in which women's labor is largely employed, while in the Eastern Soviet Republics women engage in growing cotton and silk. Field work is general among the women of the villages of India, transplanting paddy and weeding and harvesting of various crops. In Bengal the husking of rice is women's work. In Lithuania and Argentina vegetable gardening is carried on chiefly by women.

### Women as Members of Agricultural Cooperative Societies

THE guild found no instance in which women are excluded from membership in agricultural associations. Nevertheless they form only a small part of the total membership. There are three reasons for this: (1) Farms are more generally under the management of men than of women; (2) the farm is usually considered the unit of membership of agricultural associations and the rights of member-

ship are usually exercised by the head of the household; (3) the limitations existing in the various countries on the legal and social position of women tend to act as a hindrance to membership, especially of societies with unlimited liability. In Canada, the United States, and Russia, women form a very considerable part of the membership of egg and poultry associations. In the Polish Ukrainian Union women form more than 12 per cent of the membership of the dairy societies and 10 per cent in the credit societies; woman members are frequent in Norway and Czechoslovakia. On the other hand, there are few women in the agricultural associations in Wales, Switzerland, Lithuania, Iceland, Poland, and Bulgaria. In Germany, participation of women has been hindered by the rules of the old societies which, although allowing them to become members, prohibit them from attending meetings.

As to India the report comments as follows:

In India the extent of women's participation in cooperative societies varies considerably in the different Provinces. The Bombay Cooperative Institute reports that its affiliated societies, mostly credit societies, have altogether 10,000 women members and that two credit societies are composed entirely of women. In the Madras Provincial Union, again, women members are numerous, and the report of the registrar for Ceylon mentions that women are joining the societies in appreciable numbers and that one society is composed entirely of women. In the north of India, however, there is a marked contrast. The Bengal Cooperative Organization Society states that the number of women members is not large and that they usually come in as guardians of sons who are minors or as sole heirs of their husbands. In Bihar and Orissa 32 central banks report a total of 222 women members of their affiliated village banks. The registrar of the United Provinces reports that since women do not appear in public few have joined the societies although they are eligible to do so. A few societies, started exclusively for women a few years ago, had to be wound up. In the Punjab there are women members, for the most part widows, in about 500 credit societies.

The report reaches the following conclusions:

It seems clear that women could take a much larger place in agricultural cooperation with advantage both to themselves and to the movement. It is to the interest of the societies that women should receive education not only on the technical side, so as to improve the quality of the products handled by women but in the business side of the movement and the principles on which it rests; and these can best be learned by membership of and active work in the societies.

Women, on the other hand, have an immense amount to gain not merely as producers but in their home lives by the development of agricultural cooperation. Of the peasant woman, more perhaps than of any other, it is true that woman's work is never done for she always has the double claim of work in the fields and work in the home. Milking the cows and tending the animals, she often looks on as part of her domestic work; while, as a rule, she lacks even the few labor-saving facilities with which communal or commercial effort has supplied the townswoman, water supply, gas or electricity, bakeries.

The rationalization of agriculture, its better organization, replacing hand methods by mechanical methods, making possible a greater division of labor, the application of science, bringing electricity to the village, these things can transform the life of the peasant women, and they can only be won by cooperative effort. Women have, therefore, a special interest in helping to build up the movement that is making these things possible and at the same time raising the general standard of rural life, as the trade-unions raise that of industrial life, by securing to the producer a better return for labor expended.

It seems, however, that with the extension of mechanical methods the part of women in the actual work of agricultural production will tend to grow less. Women will be less occupied in the fields, more occupied with their households, and perhaps with the administrative work of the farm. The woman, whether a productive worker or not, is, in any case, always the typical consumer, and it seems

reasonable to expect that as agriculture progresses her consumers' interests will grow more important, her producers' interests less important in her mind.

There are interesting indications that one effect of organization among agricultural women is to bring out their common consumers' needs. Thus the United Farm Women of Manitoba, Canada, report increasing efforts at cooperative purchasing of household goods among the members of their local branches; some of the farm women's organizations of the United States of America are working for the formation of consumers' societies; the appointment of a woman organizer in the Punjab (India) resulted in drawing attention to the possibility of consumers' milk societies. Women are indeed a link between the agricultural and consumers' movements, and it is in the home, in the housewife's budget, that the interests of consumers and producers meet.

# RECREATION

## Promotion of Recreation by Cooperative Societies

THE activities of consumers' cooperative societies in providing means of recreation for their members, who are largely of the working classes, were reviewed by the director of the International Labor Office in his report to the Twelfth International Labor Conference. He stated:

> Cooperation is perhaps the most effective method of improving the workers' living conditions. The valuable results obtained by direct relations between consumers' cooperative societies and organizations of agricultural producers in keeping down the prices of foodstuffs necessary to existence were described in last year's report. It is proposed this year to indicate what the cooperative societies on their part can do for housing, utilization of spare time, and, in short, for working-class family life. * * *
>
> It may be said that cooperative societies, in so far as they are the continuation or the complement of, or a substitute for the household as regards some of its functions, help in the organization of family life.

The cooperative housing societies and the consumers' associations in the towns have done the most valuable work in giving the workers an opportunity "for relaxation and recreation to maintain their health and to safeguard them against some of the risks incident to their condition."

As regards the "organization of family life," the report cites the housing activities of the housing societies proper and of the building and loan associations, the farmers' telephone companies, the cooperative electricity societies, and those which are popularizing the use of electrical household labor-saving appliances, the work of some of the consumers' societies in England, France, Great Britain, and Italy in establishing health and convalescent colonies, the savings and loan departments of the consumers' societies, the benevolent funds of some societies which pay benefits for sickness and injury, the cooperative clinics, medical service, and drug stores.

### Cooperative Recreation Activities

AS REGARDS the recreational work of cooperative societies, the director states:

> It is universally admitted that the manner in which spare time is utilized is part of the proper organization of life. In this field, too, the cooperative societies have done a great deal for the exercise of faculties which are only utilized to a slight extent, if at all, during industrial work, for the satisfaction of the desire for culture, and for mere recreation as well. Their work deserves to be better known.

Along this line the report mentions the photographic competitions promoted by some of the British societies, the exhibitions of domestic arts and crafts, organized "with the avowed intention of providing distraction from mechanical and monotonous work, of satisfying the creative instinct, and of making work in spare time a pleasure."

Recreational efforts in Germany include parties, illustrated lectures, motion pictures, and meetings for similar purposes. According to the report, the societies affiliated with the Central Union in 1927 organized 11,957 such gatherings, which 3,359,497 persons attended. In France, although this work is not so extensive, it includes lectures, constitution of libraries, motion pictures, music schools, athletic clubs, fêtes, excursions, and visits to museums, factories, garden cities, and technical schools.

One French society has its own theater, holding 1,500 persons. Some of the British societies organize concerts and other entertainments, choral societies, and orchestras. "In some societies the list of entertainments is so long that it has to be carefully prepared and printed in advance." The London Cooperative Society gave 31 concerts between October, 1926, and April, 1927, while the Royal Arsenal Society of Woolwich has formed 3 young people's choral societies, 4 such societies for adults, 3 orchestras, and 16 dramatic groups.

One interesting development is that of vacation tours arranged by cooperative societies. The two British societies mentioned have conducted such tours in Germany, Belgium, Denmark, France, Sweden, and Switzerland. Hotels and boarding houses are being run on cooperative lines at the seaside and in mountain and forest districts. Among these the following instances are cited:

> In Germany there are special cooperative societies * * *, the best known of which is that of Jena, which had 5,000 members in 1927, with 11 places to stay at. In Finland, the Central Consumers' Cooperative Union and the Consumers' Cooperative Society of Tampere have purchased land, the former at the seaside near Helsingfors, the latter on an island of the lake on which it is situated, and have erected buildings and arranged their property so as to be able to receive either their members or their staff for week ends and short holidays. In France, a national holiday "colony" society has been formed by the chief consumers' cooperative societies. It maintains for the benefit of cooperators five "colonies," one of which is in the mountains and four at the seaside, which were visited in 1928 by 3,611 "colonists" for periods totaling 9,197 weeks. In Great Britain, again, there are holiday establishments, which sometimes serve as headquarters for summer schools. The Royal Arsenal Cooperative Society, for instance, owns the establishment of Shornells, on the outskirts of London; the Ipswich Consumers' Cooperative Society runs a boarding house at the seaside, etc. The same system is found in Sweden. The Union of Swedish Consumers' Cooperative Societies owns a pleasant and comfortable building on the estuary of Stockholm at Saltsjöbaden, where the International Cooperative Summer School of 1927 was held. The Swiss Union of Consumers' Cooperative Societies has even decided recently to offer a certain number of cooperators in special circumstances a free week's holiday in its holiday establishment at Weggis, on the banks of the Lake of Lucerne.

## Requisites of Cooperative Recreation

An article in the July, 1929, issue of the Review of International Cooperation comments upon the director's report and urges increased attention to the provision of healthful recreation for the leisure time of cooperative members. This article states that the efforts already made in this direction are imposing "until they are compared with the opportunities of doing this kind of work that societies constantly miss."

The cooperative concerts, dramatic performances, choirs, orchestras, etc., "serve to raise the cooperative movement in the public

esteem." But opportunities of assisting members better to utilize their leisure are sometimes ignored by societies because the connection between cooperative trade and cooperative recreation is either not understood or not perceived. "It would be well if every cooperative movement were like the Irish, which makes better living its watchword equally with better business, for the cooperative movement in reality seeks, by reforming the economic system, to lay the foundations for better living in the sense of a more cultured, refined, and humane social life."

Increased leisure may not be wholly good unless it is "accompanied by truer ideas about the ends for which leisure should be used. But most people's ideas of how leisure ought to be used are limited by their ideas of how it can be used. In many places, therefore, the task of the cooperative society will be to create opportunities of enjoying leisure in hitherto unaccustomed ways."

Three considerations should govern this policy, according to the article: (1) Societies should place first the needs of those whose resources are the most limited; (2) attention should be centered on those pursuits which are social in nature, as for instance, drama, choruses, etc.; (3) it should be recognized that since the employment of leisure is largely a question of habit, societies are more likely to be successful with the younger than the older generation.

# HEALTH AND INDUSTRIAL HYGIENE

## Effects of Monotony in Work

A RECENT report [1] issued by the British Industrial Fatigue Research Board deals with the effects of repetitive processes in causing boredom among operatives engaged in such work as filament winding, soap wrapping, chocolate packing, and tobacco weighing. The study is a first attempt to determine the factors which make for the development of boredom, which is now regarded as an influence in industrial life which is as important at least as fatigue in its effect upon output.

The continuing movement for the replacement of manual by mechanical methods of production has made an evaluation of the mental as well as of the bodily effects of monotonous work of importance in the attempts to relieve workers engaged in such employment. It is clear, the report states, that individuals vary, in their susceptibility to boredom, from the entirely immune to those who find monotonous work continuously distasteful, although the ability to adapt oneself to conditions appears to be important in the final determination of the attitude of the worker toward his work. The study was based mainly on the close observation of operatives in the four repetitive occupations named and on the output records of the groups observed. Only one or two operatives were under observation at a time and usually not on consecutive days, so that this procedure and the fact that each group of workers was under observation approximately six weeks apparently eliminated any disturbing effects which the presence of the observer might have had.

It has been shown, by experiments involving simple muscular activities such as repeatedly raising and lowering a weight by the flexion and extension of the finger, that continuance of the movements until further movement becomes impossible does not result from muscle exhaustion but that the inhibitory impulse arises in the central nervous system. From this fact the inhibitory theory of boredom has been evolved and this view of the condition is considered to be particularly applicable to repetitive processes in industry which hold little inherent interest for the worker, for in these processes, unless perfect mechanization of an operation is achieved, any wandering of attention may be harmful either to the worker or to the machine. Therefore the natural tendency on the part of the worker to allow his attention to stray is constantly being restrained in order that production may be continued, with the result that a state of boredom is induced.

The data secured as a result of the study show that boredom is frequently present among the workers in continuous manual operations of a repetitive type and that it may be the result of the weakening of the stimulus to work produced by the repeated performance of the same task; by the repression of intruding thoughts and desires; by the enforced effort involved in the performance of the work and in the maintenance of the work attitude; or by an active dislike for the

[1] Great Britain. Industrial Fatigue Research Board. Report No. 56: The effects of monotony in work, by S. Wyatt and J. A. Fraser. London, 1929.

task. It seems clear, therefore, that whether one or all of these causes are responsible for the condition of boredom, it is a complex mental state which is the result both of the nature and conditions of the work and of the mentality and temperament of the individual worker. It seems to be true that boredom is most likely to arise when the nature of the work is such that the operatives must give some but not their entire attention to work, as processes which are semiautomatic prevent freedom of thought but do not keep the mind fully occupied. It has been shown that boredom is more likely to arise in such processes than in completely automatic processes where it is possible for thought to be detached from work, thus leaving the mind free to follow the lines of personal interests and desires. Under the latter condition the operative escapes boredom through the ability to live in a world of her own creation. Likewise, in operations which demand constant attention and varied reactions to more or less unexpected situations, there is little opportunity for boredom as the mind does not have time to dwell on the unpleasant features of the work.

Conditions of work are also important factors in the amount of boredom present, as has been shown by the beneficial effect of rest periods or changes in the form of activity. The number and proximity of operatives employed also affects the mental outlook, a large group of operatives being less liable to feel the monotonous character of the work than workers who are isolated. While talking is usually a hindrance to work, it is a powerful antidote to boredom and makes repetitive work more endurable.

Personal characteristics and tendencies figure largely in the development of boredom, as the calm and submissive type of worker is less liable to be adversely affected by monotony than those who are more eager and alert. But while the more intelligent workers are more easily bored by repetitive operations, they are, on the other hand, usually above the average in productive efficiency. As the temperamental tendencies are supposed to be almost as deep-seated and persistent as the instincts and therefore closely connected with occupational success, their investigation, the report states, appears to be one of the most important problems for future study.

Adaptation to monotonous work takes place within certain limits among all types of workers. It is stated in the report that such adaptation seems to be facilitated by repetition of the task, which becomes increasingly automatic with practice and requires less attention and thought. Repetitive work also is considered to have a dulling effect on the mentality, so that desires and interests which may have been fairly numerous and intense at first become weakened by the routine and the operative begins to live along the lines of least resistance. "Knowing that she has to remain in the factory during the scheduled hours of work," the report states, "and aware that many others are in the same position, the operative philosophically resigns herself to the inevitable, and is less disturbed by conflicting desires and thoughts. In this way she is better able to endure the conditions of work, and to maintain a favorable attitude toward the task. Thus boredom is reduced by adaptation to working conditions, but the process of becoming adapted is probably not achieved without some personal sacrifice and cost."

# INDUSTRIAL ACCIDENTS

## Prevention of Coal-dust Explosions in Mines

A PAMPHLET recently issued by the United States Bureau of Mines [1] summarizes the experience which has been gained in regard to coal-dust explosions as a result of observations made after many explosion disasters and a long series of explosion tests in the bureau's galleries and experimental mine.

Coal dust, through its explosibility, presents the most important mining hazard in bituminous and semibituminous coal mines. The dust is produced in great quantities daily, and in order to be rendered harmless it must be kept very wet or treated with a sufficient amount of rock dust to make the mixture nonexplosive when it is raised in a cloud from any cause, such as an explosion of methane or by firing black blasting powder or dynamite. An electric arc or even an open flame also will start an explosion if there is a dense dust cloud.

It has been found to be practically impossible to control the hazard of coal-dust explosions by the use of water, so that rock dusting has become the accepted method for the prevention of these disasters, and its efficacy has been demonstrated repeatedly by the bureau's experiments and in mining practice. In addition to the neutralization of the coal dust by thorough rock dusting it is necessary also to prevent accumulations of gas by ventilation and to eliminate sources of ignition. These measures are essential, as unexpected amounts of methane may be given off suddenly, thus creating a gas hazard even in well-ventilated mines. Ignition may occur, also, even when permissible safety lamps, explosives, and machinery are used in place of open lights, black blasting powder and dynamite, and open sparking machinery, if the equipment is not used according to safety regulations or if there is an accident such as a fall of roof on a machine. It is necessary, therefore, that no safeguard should be neglected.

The precautions which should be taken in order to avoid explosions include thorough ventilation of every part of the mine and control of the ventilation in any mine which is gassy or slightly gassy by sampling and analyzing the return of each air-current split daily. For the detection of gas, inspectors should use safety lamps or other permissible equipment.

All abandoned work places should be sealed with strong fireproof stoppings, and those which may not be worked for a long time and can not be thoroughly ventilated and inspected should also be sealed. This is considered one of the most important features of a mine-safety program. It is the present practice in a very large proportion of the mines of the country to keep such places open, and they constitute a source of great danger, as it is practically impossible to rock dust them. The advantages gained by rock dusting and ventilation of

[1] United States. Department of Commerce. Bureau of Mines. Technical Paper No. 448: Coal-dust Explosions in Mines: Causes, Effects, and Recommendations for Prevention, by George S. Rice. Washington, 1929.

working places are likely to be lost if such places are left open and unprotected.

In gassy or slightly gassy mines electric trolleys and bare power lines or imperfectly insulated electric conductors should be used in pure intake air only and never in the return air.

Thorough rock dusting in every entry, air course, and room should be employed, and in the active workings the rock dust should extend within at least 40 feet of the face. Miners should be supplied with a pile of rock dust so that they may distribute it as the face advances, thus supplementing the periodic rock dusting. Any place in which the samples of dust show that the incombustible content of the dust from the rib or floor has fallen below 55 per cent should be rock dusted, so that an average of at least 65 per cent throughout the mine will be maintained.

## Accidents to Older Workers: Relation of Age to Extent of Disability

THE relationship of the age of victims of industrial accidents to the extent or duration of disability is the subject of a study by Albert Frederick Stevens, jr., published in The Personnel Journal, August, 1929 (pp. 138–143).

The study is based on nearly 5,000 cases of injury for which compensation was granted by the New York Bureau of Workmen's Compensation. Owing to the fact that the investigation was limited to the consideration only of length of disability in relation to the age of the injured person, records of fatalities and permanent total disabilities were not included and certain permanent partial injuries which have been standardized for "days lost" for the purpose of fixing compensation are separated from the other groups under the heading of "Schedule losses."

If, the writer says, there is a causal relationship between the age and the time lost as the result of an injury, the importance of this factor should be determined and it should be taken into consideration in the placement of workers. Older men can be put in the least hazardous jobs and those who are considered the least liable to accident can be assigned to the more dangerous types of work.

The principal cause of the lengthening of the period of disability with the advance of age is probably a slowing down in the recuperative powers of the individual, but there are said to be other factors which tend to make the convalescent period longer among the older groups. Workers past middle age are inclined to prolong the disability period, since the economic pressure is, in general, not quite so keen with them as with the younger workers, and there is considered even to be a definite amount of malingering, so that a normal 7 weeks' injury might be stretched out into the period "more than 49 days" so that payment could be secured for the first 7 days or "waiting period."

The "extent of disability" as used in the report does not include the first 7 days except in those cases where the disability lasted more than 49 days. The age class 15–19 is not considered to be strictly comparable with the other groups, as it was made up principally of young men and young women 18 and 19 years of age.

The following table shows for the different age groups the number of cases, the total number of weeks of disability, and the average number of weeks per case for different classes of injuries.

AVERAGE LENGTH OF DISABILITY RESULTING FROM INDUSTRIAL INJURIES CLASSIFIED BY AGE GROUPS AND NATURE OF INJURY

| Age | Nature of injury | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Cuts, punctures, and lacerations | | | Bruises, contusions, etc. | | | Fractures, traumatic amputations, and dislocations | | | Burns and scalds | | |
| | Number of cases | Total number of weeks of disability | Average weeks per case | Number of cases | Total number of weeks of disability | Average weeks per case | Number of cases | Total number of weeks of disability | Average weeks per case | Number of cases | Total number of weeks of disability | Average weeks, per case |
| 15–19 years | 217 | 544 | 2.5 | 74 | 213 | 2.9 | 34 | 223 | 6.6 | 12 | 23 | 1.9 |
| 20–24 years | 337 | 1,057 | 3.1 | 147 | 456 | 3.1 | 66 | 491 | 7.4 | 50 | 118 | 2.4 |
| 25–29 years | 326 | 1,099 | 3.4 | 178 | 708 | 4.0 | 62 | 658 | 10.6 | 46 | 166 | 3.6 |
| 30–34 years | 225 | 686 | 3.0 | 147 | 613 | 4.2 | 64 | 503 | 7.9 | 41 | 99 | 2.4 |
| 35–39 years | 192 | 673 | 3.5 | 117 | 690 | 5.9 | 57 | 605 | 10.6 | 26 | 117 | 4.5 |
| 40–44 years | 144 | 617 | 4.3 | 111 | 537 | 4.8 | 31 | 738 | 23.8 | 17 | 50 | 2.9 |
| 45–49 years | 108 | 543 | 5.0 | 85 | 398 | 4.7 | 46 | 603 | 13.1 | 12 | 33 | 2.8 |
| 50–54 years | 74 | 401 | 5.4 | 68 | 412 | 6.1 | 22 | 320 | 14.5 | 11 | 41 | 3.7 |
| 55–59 years | 42 | 231 | 5.5 | 38 | 243 | 6.4 | 19 | 312 | 16.4 | 2 | 4 | 2.0 |
| 60–64 years | 31 | 222 | 7.2 | 21 | 94 | 4.5 | 7 | 120 | 17.1 | 5 | 14 | 2.8 |
| 65 years and over | 15 | 146 | 9.7 | 13 | 139 | 10.7 | 8 | 115 | 14.4 | 2 | 3 | 1.5 |
| Total | 1,711 | 6,219 | 3.6 | 999 | 4,503 | 4.5 | 416 | 4,688 | 11.3 | 224 | 668 | 2.9 |
| | Sprains and hernias | | | Schedule losses | | | All other[1] | | | Grand total | | |
| 15–19 years | 42 | 178 | 4.2 | 33 | 991 | 30.0 | 1 | 8 | 8.0 | 413 | 2,180 | 5.3 |
| 20–24 years | 112 | 540 | 4.8 | 79 | 3,151 | 39.9 | 5 | 24 | 4.8 | 796 | 5,837 | 7.3 |
| 25–29 years | 136 | 777 | 5.7 | 97 | 3,663 | 37.8 | 2 | 8 | 4.0 | 847 | 7,079 | 8.4 |
| 30–34 years | 102 | 457 | 4.5 | 94 | 4,427 | 47.1 | 6 | 25 | 4.2 | 679 | 6,810 | 10.0 |
| 35–39 years | 108 | 533 | 4.9 | 101 | 3,902 | 38.6 | 5 | 7 | 1.4 | 606 | 6,527 | 10.8 |
| 40–44 years | 79 | 537 | 6.8 | 86 | 3,530 | 41.0 | 5 | 50 | 10.0 | 473 | 6,059 | 12.8 |
| 45–49 years | 69 | 551 | 8.0 | 76 | 3,023 | 39.8 | 8 | 173 | 21.6 | 404 | 5,324 | 13.1 |
| 50–54 years | 37 | 242 | 6.5 | 66 | 3,445 | 52.2 | 3 | 88 | 29.3 | 281 | 4,949 | 17.6 |
| 55–59 years | 27 | 152 | 5.6 | 39 | 1,911 | 49.0 | 1 | 1 | 1.0 | 168 | 2,854 | 17.0 |
| 60–64 years | 17 | 150 | 8.8 | 19 | 811 | 42.7 | 1 | 82 | 82.0 | 101 | 1,493 | 14.8 |
| 65 years and over | 4 | 43 | 10.8 | 17 | 800 | 47.1 | 1 | 35 | 35.0 | 60 | 1,281 | 21.4 |
| Total | 733 | 4,160 | 5.7 | 707 | 29,654 | 41.9 | 38 | 501 | 13.2 | 4,828 | 50,393 | 10.4 |

[1] Includes concussions, foreign bodies (in eye, etc.), and asphyxiation.

It will be seen that for every class of injury except burns and scalds there was a definite increase in the duration of disability as the age increased, with, however, occasional slight recessions. The increase for all causes combined is steady for all age groups except those between 50 and 59 years, when there was a rather decided drop in the average for the age group 55–59, but this is accounted for by the fact that a great number of low-hazard occupations, such as watchmen, sweepers, etc., are filled generally by men 50 years of age and over. The great increase for the group aged 65 years and over shows, it is considered, that at this period of life there is very little resistance left, and although the exposure to serious hazards is at a minimum the time loss per injury is high.

An analysis of one type of injury—cuts, punctures, and lacerations—shows that in the lower age group 83.3 per cent of the cases

required less than four weeks for recovery while in the oldest group only 46.6 per cent were able to return to work within four weeks from the date of injury. This means, it is stated, that not only will the average duration increase with the age period but a relatively large number of serious cases will be found among the older workers. The high correlation which this study showed, therefore, between age and duration of disability for all injuries except burns and scalds is regarded as definite evidence that the older a person is, when injured, the longer, in general, will be the resulting disability.

## Importance of Standardizing State Safety Regulations

THE necessity for establishing basic safety standards for the purpose of securing uniformity in State safety regulations is emphasized in an address by Lewis A. De Blois, director of the safety engineering division of the National Bureau of Casualty and Surety Underwriters at the Sixteenth Annual Convention of the Association of Governmental Officials in Industry of the United States and Canada, held at Toronto in June, 1929.

There are at present two national organizations in the United States which are concerned in establishing industrial safety standards. These are the American Standards Association and the National Council on Compensation Insurance, the latter being a semigovernmentally controlled body representing the various casualty insurance interests. As the insurance companies or funds are represented on both these committees, the endeavor is made, it is stated, to have the two sets of standards as nearly uniform as possible, and with minor exceptions their safeguarding requirements are so nearly alike that it can be said there is only one set of standards. With the exception of the safety rules or codes of industrial corporations and trade associations, therefore, the application of safety standards in manufacturing industry takes place either through the influence of the insurance carriers in securing the adoption of their safety code—the Industrial Compensation Rating Schedule—or by the enforcement of State laws or regulations.

While there is no comprehensive comparative statement of the laws, regulations, or orders of the States which have attempted to establish safety standards, there is no doubt that the divergence in the regulations is very great. A comparison of the regulations adopted by 13 States for the protection of workers from contact with toothed gearing was made by the speaker, gears being selected because they present one of the simplest and most obvious hazards, with the least excuse for variations in protection. There was found to be a complete lack of uniformity in defining the coverage, in the type of protection required, and in the manner of installation of the protective devices. The same thing was true of the revolving-spoke hazard; for this hazard one of the three accepted types of gear protection is entirely unsuited, but this fact was ignored by some of the States, while others recognized it only under certain conditions, and those that did specify that protection should be provided did not agree as to when or how the protective device should be used.

An inquiry sent to the different States in regard to the guarding of machine tools failed to bring a reply from 16 States, while 11 stated they had no regulations, 8 had general provisions only, and 13 had specific requirements. With such a condition, it is obvious that the rulings of insurance inspectors and State inspectors will not agree and that plant owners, as a result, are faced with the difficulty of satisfying conflicting orders. From the insurance standpoint the situation is difficult, since although the companies are attempting to keep the rating schedule in harmony with the American Standards Association codes, in transmitting the regulations to member companies their use can be urged only where they do not conflict with local laws, regulations, and ordinances. The lack of uniformity in standards also presents a problem to corporations which operate plants in many States, as their safety departments must enforce not only their own regulations but must see that all State regulations are carried out.

Manufacturers of machinery who desire to make their products safe are confronted with the impossibility of manufacturing safety devices to meet the different State requirements. If uniformity could be secured, however, so that guarding devices could be built as essential parts of the machines, it would lift a material portion of the burden, the writer says, from the shoulders of the State inspectors, the insurance inspectors, and the safety engineers of industrial concerns and it would also result in machinery being guarded in those small establishments which are never or rarely reached by inspectors.

The remedy for the situation, it is suggested, lies in the cooperation of State labor officials, the safety organizations, the insurance interests, and trade associations concerned with the manufacture of machines and machinery. "Accidental industrial deaths," the speaker said, "are not decreasing. What we have done may have checked a sharper rise in the curve, but I believe that you will agree with me that a civilized people can not contemplate with equanimity the killing of 24,000 persons a year. In the last decade accidents in the United States have abruptly terminated 830,000 lives, and of this slaughter industry is responsible for at least one-quarter. The time has certainly come for more concerted, positive, and constructive action."

# WORKMEN'S COMPENSATION

## Legislative Action on Workmen's Compensation in 1929

IN PREVIOUS issues of the Monthly Labor Review[1] summaries of amendments and legislation of the workmen's compensation acts have been made for the following States: Idaho, Iowa, Kansas, New Jersey, New York, North Carolina, Rhode Island, Texas, Vermont, West Virginia, and Wyoming. Since that time data have been received from several additional States (Colorado, Maryland, Michigan, Minnesota, Missouri, Montana, New Mexico, North Dakota, South Dakota, and Washington). The action taken by them is summarized below.

### Colorado

CHAPTER 186 makes several changes in the compensation law, perhaps the most important of which are the increased compensation awards allowed in total and partial disability and death cases. The maximum weekly payment in total disability and death cases is increased from $12 to $14 and the maximum amount increased from $3,750 to $4,375. In temporary partial disability cases the maximum weekly payment is increased from $12 to $14 and the aggregate sum is increased from $1,560 to $1,820. In permanent partial cases the maximum amount is now $3,640 instead of $3,120, as heretofore. The maximum lump-sum payment is increased from $3,750 to $4,375.

The maximum period during which the employer must furnish medical and surgical aid is extended from 60 days to 4 months and the amount increased from $200 to $500. A new method of determining the average weekly wage is now provided by dividing the total earnings for the past 12 months by 52, instead of 6 months' earnings by 26; and in the case where the injured employee has been ill or in business for himself the average weekly wage is now ascertained by dividing the total earnings of the 12-month period by the difference between 52 weeks and the number of weeks during which such employee was ill or in business for himself. Several changes were also made in the list and salaries of employees of the State Compensation Insurance Fund.

### Maryland

THREE acts were passed by the Legislature of Maryland amending the workmen's compensation law. The first (ch. 331) enlarges the list of extrahazardous employments to include bill posters; and musicians at hotels, theaters, and places of entertainment. The second (ch. 425) provides that the commission may now cancel the employer's insurance policy upon 10 days' notice, for

[1] May, 1929 (pp. 135, 136); August, 1929 (pp. 85–88); September, 1929 (pp. 89, 90).

failure to report his pay roll to the commission, instead of the penalty of $100. The third (ch. 426) provides for the employment of a director of safety and two inspectors; and the imposition of penalties of $50 to $500 for failure to comply with safety regulations of the commission, and interference with inspection work, instead of the same penalty as heretofore imposed for failure to provide safeguards or protection required by the commission.

### Michigan

ONE act (No. 113) was passed by the Legislature of Michigan amending the workmen's compensation law. The commission is now authorized to revoke the acceptance of the act by the employer for violations of any of its provisions. The age of an illegally employed minor for which double compensation must be paid is now fixed at under 18 instead of between 16 and 18. Children of a deceased employee whom he had deserted are now conclusively presumed wholly dependent; and provision is now made for the payment of the remaining compensation after the person has reached 21 and is not incapacitated, to other dependents, as in the case of the remarriage of a dependent wife. An award of compensation must now be paid or tendered within 15 days before proceedings are commenced to stop or reduce the compensation.

### Minnesota

SEVERAL amendments were made to the workmen's compensation law of Minnesota by the legislature of 1929. The limitation of 90 days during which time the employer was formerly required to furnish medical treatment is now omitted (ch. 248). In the case of a minor suffering a permanent disability it is now provided that the weekly earnings in computing compensation shall be the probable earnings after reaching legal age, based on the average earnings of an adult workman in the same plant in which the minor was employed when injured (ch. 250). The industrial commission of the State is now empowered to appoint any suitable person in place of the consular representative in the case where a nonresident alien dependent has, within 90 days after the death of the alien employee, filed a request designating some person residing in the State to act for him (ch. 251). Provision is now made that upon the failure of a subcontractor to secure payment of compensation, the general contractor is liable, subrogated, however, to the rights of the injured employee against his immediate employer (ch. 252). In the commutation of lump-sum payments the basis of calculation is now 5 per cent instead of 6 per cent (ch. 400).

### Missouri

THE only compensation legislation of Missouri for 1929 was the act increasing the salaries of certain employees of the commission and the new requirement that the medical advisor shall be a licensed physician and surgeon of not less than 5 years' active general practice (p. 444).

### Montana

SEVERAL changes were made in the workmen's compensation law by chapter 177 of the Montana Acts of 1929. Claims for com-

pensation must now be made within 30 days after the accident instead of 60 days. In specialized medical and hospital service a sum not to exceed $300 is allowed, and provisions giving the injured employee adequate hospital facilities are provided. The fee for hernia operations is increased from $50 to $100. In total and partial disability cases and in the schedule of specific injuries the rates of compensation now range from 50 to 66⅔ per cent of wages and the maximum from $15 to $21, based on the number of specified dependents instead of the base rate of 50 per cent of wages, as formerly. The minimum weekly rate in total disability and death cases is increased from $7 to $8. In partial disability cases the maximum period is now 500 weeks instead of 150. In death cases the rate of compensation to beneficiaries residing in the United States is now on a graduated scale ranging from 50 per cent of wages, and weekly maximum of $15 (in the case of one beneficiary) to 66⅔ per cent of wages and maximum of $21 weekly (in the case of six or more beneficiaries). For beneficiaries residing outside of the United States the scale now ranges from 40 per cent of the amount payable to resident beneficiaries in the case of one beneficiary to 50 per cent in the case of four or more beneficiaries. Provision is also now made for payment of compensation to two major dependents of 55 per cent of wages, maximum $17 per week; and for minor dependents, if two, 35 per cent of wages, and 40 per cent if three or more, maximum $21 weekly.

The waiting period has been made more specific, and reduced in the case where an injured employee has a beneficiary or a dependent residing in the United States, so that hereafter no compensation shall be paid for the first week, unless the disability continues for three weeks. An appeal to the district court in the county where the accident occurred may now be taken by either party, instead of the former provision that such appeal could be taken only by the employee or dependent. Several new provisions affecting the previous disability and change of degree of injury of the employee are now provided. The board is prohibited from changing an award after two years, or to change an order approving a final compromise settlement of compensation.

## New Mexico

THE workmen's compensation law was reenacted, with several changes, by chapter 113. The coverage of the act was extended to include public bodies employing four or more workmen. Road building is now considered an extrahazardous occupation. Compensation is further secured by allowing foreign corporations doing business in the State to file proof of solvency in the district court of Santa Fe County. Notice of injury may now be made to the employer within 30 days instead of 2 weeks as formerly, and claim for compensation must be filed within 6 months instead of 60 days. The waiting period was reduced from 10 to 7 days. Payments of compensation must now be made within 16-day instead of 31-day intervals. In total and partial disability cases the rate of compensation has been increased from 50 to 55 per cent of earnings and the maximum weekly amount is increased from $12 to $15. If an employee now earns less than $8 weekly full wages are paid instead of the former minimum of $6. The maximum period in total dis-

ability cases has been extended to 550 weeks instead of 520 weeks, as formerly. The funeral allowance has been increased from $75 to $125. Facial disfigurement allowance is now $750 instead of $500. The former provision, that "upon the adoption of any dependent" the right to any benefits shall cease, is now omitted. The maximum amount for which the employer is liable for medical aid is now increased from $150 to $350, and must be furnished as long as medical aid is reasonably necessary, instead of the former limitation that it must be furnished during the first 10 days. Attorneys' fees may be increased, in the discretion of the court, where the claimant refuses compensation and collects through court action an amount larger than that given by the employer. Reports of all accidents must now be made within 30 days to the insurance department of the State corporation commission.

### North Dakota

SEVERAL changes were made by chapter 260 of the Acts of 1929. The schedule for specific injuries has been liberalized in a number of instances—the minimum amount for loss of a hand (at or above the wrist) or a leg (at or above the knee) is increased from $990 to $1,170; for loss of the second or distal phalange of thumb, from $125 to $135; for loss of the sight of an eye, from $585 to $600. Several new injuries have been added to the schedule, namely, loss of the first phalange of great toe or of any other toe; the loss of a metacarpal bone; and the permanent partial loss of use of a member or sight of an eye. Permanent loss of use of a member is now considered the same as the loss of such member. The maximum allowance for burial expenses is increased from $150 to $200. Retroactive provisions are included, and the workmen's compensation bureau may adjust previously awarded compensation or award compensation previously refused, according to the terms of the new provisions.

### South Dakota

TWO ACTS were passed amending the compensation law of South Dakota. Chapter 253 amends the coverage provisions of the act excluding public officers elected or appointed for a regular term, but covering deputy sheriffs, constables, marshals, policemen, and firemen, including volunteer firemen. Private employments are now excluded only if they are not in the usual course of the employer's business, instead of the former provision that they were excluded only if they were "both casual *and* not in the usual course of the employer's business." Chapter 254 amends the permanent partial disability schedule to allow for the loss of an arm or leg in cases of amputation below the elbow or knee.

### Washington

TWO ACTS affecting the workmen's compensation act of Washington were passed by the 1929 legislature. Chapter 132 provides that no action can be brought against an employer or workman as a third person if he is engaged in any extrahazardous employment at the time of the accident. The specific disability schedule has been

rearranged and several former items dropped, including ankylosis of ankle and knee; hereafter the award for an ankylosed joint shall not exceed 30 per cent of the amount for the amputation of the member at the disabled joint. In the case where a preexisting disease affects complete recovery of an injured workman it is now provided that compensation shall be paid only for the period of disability which the injury alone would have caused had the disease not been present. Authorization is now given to the industrial department on its own motion to satisfy all claims by making lump-sum payments. Several changes were also made further securing the payment of compensation. In appeal cases authority is now given to any regularly commissioned employee of the department to conduct rehearings.

A new act (ch. 136) was passed providing that all moneys deducted from the employee's wages for medical, surgical, or hospital care are now to be considered a trust fund, no part of which is to become the assets of the employer.

# LABOR LAWS AND COURT DECISIONS

## Right of Railroad Employees to Collective Bargaining Upheld

THE Circuit Court of Appeals of the Fifth Circuit in a recent decision upheld the District Court of the United States for the Southern District of Texas in a case involving the right of railroad employees to bargain collectively through the selection of representatives of their own choosing. During the summer of 1927 the Brotherhood of Railway and Steamship Clerks, Freight Handlers, Express and Station Employees, claiming to represent a large number of the employees of the Texas & New Orleans Railroad Co., brought a bill in equity to restrain the railroad company from forming a so-called "company union," known as "The Association of Clerical Employees—Southern Pacific Lines." The railroad company undertook the formation of the association while a wage controversy was pending before the United States Board of Mediation, created under the railway labor act of 1926. On August 2, 1927, the railroad requested the board of mediation to relinquish jurisdiction. On the following day, August 3, 1927, the United States District Court for the Southern District of Texas issued an injunction restraining the railroad from violating section 2 of the railroad labor act, which provides:

> Representatives, for the purposes of this act, shall be designated by the respective parties in such manner as may be provided in their corporate organization or unincorporated association, or by other means of collective action, without interference, influence, or coercion exercised by either party over the self-organization or designation of representatives by the other.

The railroad company thereupon notified the board of mediation that the brotherhood did not represent a majority of its clerical employees, and that they would recognize only the association as representative of a majority of its clerical employees.

It appears from the opinion of the district court that the railroad thereafter continued on a course of action in violation of the injunction and in October, 1927, contempt proceedings were brought against the railroad by the brotherhood. The case went to trial, and the district court handed down an opinion on February 6, 1928, in favor of the brotherhood.

The Texas & New Orleans Railroad Co. thereupon appealed to the United States Circuit Court of Appeals, Fifth Circuit. The railroad's first contention was that the section of the railroad act relied on by the brotherhood did not justify the issuance of an injunction, according to a case previously decided by the United States Supreme Court. (Pennsylvania R. R. System and Allied Lines Federation No. 90, et al. *v.* Pennsylvania R. R., 267 U. S. 203.) The court, however, said:

> That case and the instant one differ, in that a question presented in the former was as to regulations of the Labor Board being judicially enforceable, while the

latter presents the question whether a provision of an act of Congress gives a right claimed, and, if so, whether a court can award redress for a violation of that right. By the quoted provision Congress conferred on employees of a carrier the right to select their representatives, for the purposes of the act, by means of collective action, without interference, influence, or coercion exercised by the carrier over the self-organization or designation of representatives by the employees, and imposed on the carrier the duty of refraining from exercising the forbidden interference, influence, or coercion.

Though under the railway labor act it is optional with carriers and their employees to agree or not to agree to use the means provided for by the act for the settlement of disputes, it is not optional with either to violate rights conferred on the other by the act.

As to the second contention of the railroad that the provisions of section 2 of the railroad labor act were beyond the power of Congress to enact, the court said:

We think that under the power to regulate interstate commerce it is competent for Congress to make provision for the settlement of disputes between interstate carriers and their employees with reference to rates of wages, rules, and working conditions, to the end of preventing such disputes resulting in the interruption or stopping of the movement in interstate commerce of freight or passengers. (Wilson *v.* New, 243 U. S. 364.) Certainly a not inappropriate feature of such a provision would be one having a tendency to secure to each of the parties to such a dispute, when an attempt to effect a settlement of the dispute is to be made, the opportunity of selecting a representative not subject to the domination or under influence of the other party, as a settlement could not reasonably be expected to be satisfactory to both the parties and the public where one of the parties to the dispute was not loyally or fairly represented in the transaction which resulted in the settlement. To say the least, we have not been convinced of the invalidity of the provision in question.

The railroad lastly contended that because there was no property right in question the issuance of the injunction was a violation of the anti-injunction provision of section 20 of the Clayton Act. The court, however, held that a property right was involved, saying:

The term "property right" is broad enough to include the right to make contracts for the acquisition of property, by the rendition of services, or otherwise, and the right of an employee to money or other property exchanged, or to be exchanged, for his services. (Coppage *v.* Kansas, 236 U. S. 1, 14.) It hardly would be denied that injury to a property right of one would result from keeping him from realizing as much income from his occupation or business, though it consists in rendering personal services for compensation, as he could have earned if his freedom of acting and contracting had not been interfered with. We are of opinion that within the meaning of the provision now under consideration injury to property rights of members of a group of employees would result from conduct of their employer having the effect of such employees, in dealings between them and their employer with reference to terms and conditions of employment, having a representative subject to the domination or selfish influence of the employer, as a probable consequence of employees being so represented would be their failure to fare as well financially as they would have fared if they had been represented by a loyal agency intent on promoting their interests. * * * In the circumstances attending the institution of the suit, one of those circumstances being a realization by the carrier that a settlement of the pending dispute as to wages could not be effected without some increase in the wages of its clerks there was a substantial basis for the conclusion that members of the group of employees whose wages were in question had a property or financial interest in being afforded the opportunity of choosing a representative to act for them by collective action, without interference, influence, or coercion exercised by the carrier.

The circuit court of appeals, therefore, in affirming the decree of the district court, concluded "That the granting of an injunction in this case was not a violation of the statutory provision in question and, further, that the allegations and proofs warranted the granting

of injunctive relief." (Texas & N. O. R. R. Co. *v.* Brotherhood of Railway and Steamship Clerks, etc., U. S. C. C. A. June 10, 1929, 33 Fed. (2d) 13.)

## Amendment to Mexican Constitution, Authorizing Federal Labor Code

AMENDMENTS to articles 73 and 123 of the Federal constitution of Mexico have been adopted after having been passed by the Chamber of Deputies and the Senate and having been approved by more than a majority of the State legislatures, according to a report from Herschel V. Johnson, chargé d'affaires at Mexico City, dated August 23, 1929. A special session of the Mexican Congress was held from July 25 to August 22, 1929, to act on these constitutional amendments authorizing the federalization of labor legislation, which were necessary before the projected Federal labor code could be considered. A translation of the amended articles is as follows:

ARTICLE 73. Congress has the power: * * * Paragraph X: To legislate for the entire Republic concerning mining, commerce, and credit institutions; to establish the sole bank of issue in accordance with article 28 of the constitution, and to enact labor laws regulating article 123 of the constitution. The application of the labor laws corresponds to the State authorities, in their respective jurisdictions, except in cases which refer to the railways and other transportation enterprises operating under Federal concession, to mining, and to hydrocarbons, and finally to labors performed on the sea and in the maritime zones, in the manner and terms which regulatory provisions shall fix. * * *

ARTICLE 123. Without violating the following bases, Congress shall enact labor laws which shall regulate the labor of manual laborers, day laborers, office employees, household servants, and artisans, and generally all labor contracts. * * *

XXIX. The enactment of a law of social insurance is considered of public utility, and said law shall include insurance against sickness, death, involuntary unemployment, invalidism, accidents, and other analogous purposes.

President Portes Gil has been responsible for the proposed Federal labor code whose purposes are "to establish the juridical rules which will govern the relations between employers and workers and to legally regulate the conditions under which work must be performed," which, if passed, will apply throughout the national territory.

The proposed law has aroused widespread interest and has been the cause of much discussion and criticism. It seeks to regulate labor contracts, to assure adequate compensation for industrial accidents and occupational diseases, to establish uniform working hours, and, briefly, to define and control the relations between capital and labor.

The Bureau of Labor Statistics has an official copy of the proposed code, which may be consulted.

# FAMILY ALLOWANCES

## Report of Australian Royal Commission on Child Endowment

ON SEPTEMBER 30, 1927, a royal commission was appointed to study the whole question of child endowment and family allowances, with a view to determining whether the institution of such a system would be desirable, and if so, how it could be established, its relation to wage fixing, methods of administration, and cost. Evidence was taken by this body in all the Australian States, 227 witnesses being examined, including official representatives of the Commonwealth and State government departments, members of the faculties of the departments of economics and commerce of different universities, medical men connected with maternity and child-welfare work, representatives of important commercial establishments, including banks, also of organizations of employers, labor unions, women's associations and leagues, philanthropic and charitable bodies, nursing societies, kindergarten associations, and infant health centers.

The report of this commission has recently been submitted.[1] The majority report, signed by three of the five members of the commission, is adverse to child endowment financed wholly from public revenues or by a direct levy on industry. These three members suggest, however, that a family-allowance scheme which would bring about a certain change in the distribution of wages "deserves the most earnest and favorable consideration of wage earners and of industrial tribunals." The minority report, signed by the two remaining members, favors the adoption of a child-endowment system, the funds for which it is proposed to raise by a revision of Federal income taxation with a view to reducing the tax-exempt income to £200 (at par $973.30) for persons without dependents and to grading more steeply the tax rates for incomes at the highest levels.

### Majority Report

THE following summary of the majority opinion is given at the beginning of the report, the majority members being Thomas S. O'Halloran, K. C. (chairman), Ivor Evans (of the firm of Briscoe & Co., Melbourne), and Stephen Mills, C. M. G. (acting commissioner of the interstate commission).[2]

The scheme contemplated in the terms of reference is one in which the necessary funds would be provided from public revenue, or from industry, or from both sources. The assumption seems to be (and this was the point of view of numerous witnesses) that this provision of funds should be wholly an addition to the sums now paid as wages.

[1] Australia. Royal Commission on Child Endowment or Family Allowances. Report. Canberra, 1929
[2] The professions of the members are given here as reported in Monthly Notes, May, 1929, p. 1, published by the Family Endowment Society.

In our opinion, such a scheme should not be adopted. Some of the reasons for that conclusion are that—

1. The claim that child endowment in this form is necessary on the ground that wages are insufficient has not, we think, been established.

2. The additional taxation necessary to finance from public revenue a scheme for full maintenance of dependent children as claimed would cause disastrous reactions.

3. If "industry" were directly levied upon to provide the funds, or an important proportion of the funds, the result would be not less injurious. An immediate effect would be an increase in the cost of living, partially defeating the object of the levy. Also there would be great danger of adding to unemployment, and so increasing rather than diminishing the total of distress in the community.

4. The basic wage contains elements of child endowment much more than sufficient, if directly applied, to provide for all existing dependent children. If the basic wage be not reduced by the elimination of those elements, and if public funds be applied to provide a general scheme of child endowment, the result, in our opinion, would be a marked flush of extravagant spending and a sharp rise in the cost of living, shortly followed by a check in prosperity, by a more or less severe collapse in values, and by serious unemployment.

5. By removing from parents all financial responsibility for their children, parental responsibility would be weakened, incentive to effort reduced, and the sense of unity of interest between parents lessened.

6. Any available public money could be more beneficially used than in providing child endowment. So far as the residual cases in the community which need some assistance are concerned, we are satisfied that the expenditure of sums much less than those required, even for a small measure of child endowment, would, if applied to the extension and perfecting of existing social services, secure greater benefits.

7. We are of opinion that essential conditions precedent to the establishment of any scheme of child endowment should be—

(*a*) That the Commonwealth Parliament should have first obtained full and exclusive power—(1) to control wage fixation and "industrial matters" as defined in industrial statutes; (2) to establish and control child endowment.

(*b*) That any existing State legislation instituting a scheme of child endowment be repealed.

(*c*) [A condition of another order] that the basic wage should be reduced by elimination of the provision for children which is now an integral part of that wage.

8. Unless both child endowment and wage fixation were under the exclusive control of one tribunal, new and prolific causes of industrial discontent and disputes would be created.

## Minority Report

THE minority report was signed by Mrs. Mildred Muscio (vice president and international secretary of the National Council of Women) and Mr. John Curtin (editor of the Western Australian Worker).

The findings of this report are as follows:

1. That for workers in industry some system of family allowances is the logical corollary of the living-wage doctrine.

2. That on the whole the basic wage as determined by the Commonwealth and State tribunals has provided a frugal standard of comfort for a family of man, wife, and two children.

3. That for families of wage earners where the children number more than two, the standard has been generally lower than is reasonable, having regard to the definitions implied in the awards of the courts, the disparity increasing with the size of the family.

4. That in equity any system of allowances to improve the standard of living for the larger families of wage earners should be extended to similar families of those who are not wage earners.

5. That in the case of widows with dependent children and other families without a male wage earner there is urgent need both in the interests of these families and of the community for the payment of allowances.

6. That it is undesirable to make allowances for the families of wage earners part of the system of wage fixing, and that although it may be desirable for all wages to be fixed for the same family unit, it is not essential that any scheme of family allowances should be delayed because the Commonwealth Government has not at present sole control of industrial matters.

7. That the country can at present afford to inaugurate a moderate system of family allowances.

8. That such an expenditure of part of the national income would be a good investment for the community.

9. That according to the evidence of the Federal solicitor general (Sir Robert R. Garran) the Commonwealth Parliament possesses the constitutional power to enact legislation providing for a system of allowances to families.

10. That the present services in respect of maternity and child welfare are inadequate and need considerable extension to insure that all mothers and children who need them have these facilities available.

11. That in the larger cities the supply of rented houses is inadequate for families on a low income.

# PENSIONS AND INSURANCE

## Mothers' Pension Legislation as of January 1, 1929 [1]

AT THE time of the beginning of the mothers' aid movement and before mothers' aid laws were enacted, a number of States and localities had recognized the principle of such aid and had applied it in a limited way. Prior to the act of 1913 the juvenile courts of some counties of California granted county aid to children in their own homes. An Oklahoma law of 1908 provided for "school scholarships" to be paid by counties to children whose widowed mothers needed their earnings. A Michigan law of 1911 also authorized payment from school funds to enable children of indigent parents to attend school. Through a resolution by the county board of Milwaukee County, Wis., in 1912, aid to mothers for the care of children in their homes was given through the juvenile court. In New Jersey some aid to dependent children in their homes had been granted from county funds prior to the enactment of a special law in 1913.

The first definite legal provision of aid to mothers of dependent children was passed by the Missouri Legislature in 1911. At first this provision applied only to Jackson County (in which Kansas City is located), but later in the same year it was extended to the city of St. Louis. The first state-wide mothers' aid law was enacted in Illinois in 1911. Colorado adopted by popular vote the "mothers' compensation act," submitted at the election of 1912, and effective January 23, 1913. During 1913, 18 States enacted mothers' aid laws;[2] 8 States acted in 1915,[3] 1 in 1916,[4] 7 in 1917,[5] 1 in 1918,[6] 4 in 1919,[7] 1 in 1920,[8] 2 in 1923,[9] 1 in 1926,[10] and 2 in 1928.[11]

By January 1, 1929, laws authorizing assistance from public funds for dependent children in their own homes had been adopted by 44 States, the District of Columbia, Alaska, and Hawaii. Alabama, Georgia, New Mexico, and South Carolina were the only States not having legislation providing public aid for dependent children in their own homes. States having such laws variously term them "mothers' pensions," "mothers' allowances," "mothers' assistance fund," "widows' compensation," "aid for dependent children," "aid to mothers of dependent children," "an act to promote home life for dependent children" and "childrens' aid fund."

Not all these States, however, have carried into actual practice the theory of their mothers' aid laws. The principle of home care for dependent children is generally accepted in this country, but

[1] This article is based upon reports of the United States Children's Bureau. A tabular summary of the State laws relative to public aid to children in their own homes in effect Jan. 1, 1929, Chart 3, 1929, Public aid to mothers with dependent children, 1928 (Pub. No. 162); Laws relating to mothers' pensions, 1919 (Pub. No. 63).

[2] California, Idaho, Illinois, Iowa, Massachusetts, Michigan, Minnesota, Nebraska, Nevada, New Hampshire, New Jersey, Ohio, Oregon, Pennsylvania, South Dakota, Utah, Washington, Wisconsin.

[3] Kansas, Montana, New York, North Dakota, Oklahoma, Tennessee, West Virginia, Wyoming.

[4] Maryland.

[5] Alaska, Arizona, Arkansas, Delaware, Maine, Texas, Vermont.

[6] Virginia.

[7] Connecticut, Florida, Hawaii, Indiana.

[8] Louisiana.

[9] North Carolina, Rhode Island.

[10] District of Columbia.

[11] Kentucky, Mississippi.

the experiment in providing such care has by no means demonstrated that the need has been met. In several States practically no use has been made of the legal provision. In many States excellent work has been done in certain localities, whereas in other localities of the same State the provision has been ignored or made inoperative through lack of adequate appropriations.

Concerning persons to whom aid may be given it should be noted that the central idea in the theory and early discussion of aid to dependent children in their own homes and the most common inclusion in the earlier laws was aid to widows.[12] Gradually the conception has widened, and the trend of legislation in the various States has been toward increasing the application of the law, giving the benefit of the aid to dependent children wherever the circumstances are such that the home should be maintained. The prevailing method is either to permit aid to be granted to any mother with dependent children or to limit aid to certain types of cases, including those where the father is dead, deserting, divorced, physically or mentally incapacitated, or imprisoned, with necessary restrictions pertaining to cases of desertion and divorce.

Eligibility requirements as to residence and citizenship vary in the different States. Most States do not require citizenship or declaration of intention to become a citizen of the United States, but 12 States and the District of Columbia have this requirement. Forty-one require a period of residence in the State; 7 of these contain no further provision, 17 specify residence both in the State and in the local political unit, and 17 mention county residence only (or residence in other local political unit). Twenty-three specify the length of residence in the State; 14 require 1 or 2 years, 6 require 3 years, and 3 require 4 or 5 years. Thirty-four require from 6 months' to 5 years' residence in the specified local political unit. Five of the 41 States require the father to have been a resident of the State at the time of his death or disability. The District of Columbia requires one year's residence preceding application for aid.

In the majority of the States no specific mention is made of ownership of property, but in several laws there is either a prohibition of such ownership or a more reasonable provision limiting the amount of such property. For example, in the Wisconsin law "the ownership by a mother of a homestead shall not prevent the granting of aid * * * if the rental thereof would not exceed the rental which a family of the same size as the family of such parent, receiving aid, would be obliged to pay for living quarters," or in the Nebraska law, "a mother shall not receive such relief who is the owner of real property or personal property other than the household goods of more than $2,000."

The ages of children who may be given aid, the amount of aid permitted under the law, the organization responsible for the administration of the laws, and State supervision of administration, if any, with citations of the laws, have been outlined in a chart below for the purpose of making it easier to compare the provisions of the several laws in these respects.

[12] The Illinois act of 1911 was entitled "Funds to parents act," and the Colorado act of 1912 included a parent, or parents, who because of poverty were unable to provide properly for a dependent child. In Illinois, however, revision has limited the application of the law to dependent children whose fathers are dead, deserting, or totally incapacitated.

| State | Age under which aid may be given | Maximum allowance per month | Administration | State supervision | Law |
|---|---|---|---|---|---|
| Alaska | 16 | One child, $15; each additional child, $10. | District board of children's guardians upon report of juvenile court. | Awards require approval of governor. | 1917, ch. 16; 1923, ch. 44. [Original enactment 1917.] |
| Arizona | 16 | Amount not specified; to be fixed by State child-welfare board. | State child welfare board in cooperation with local agency. | State child welfare board | 1921, ch. 53. [Original enactment 1914, declared unconstitutional. Next enactment 1917.] |
| Arkansas | 15 | One child, $10; each additional child, $5. | Juvenile court; if none, county court. | | 1917, Act 326; 1921, Act 615; 1923, Act 56. [25 of the 75 counties of State are exempted from provisions of law.] [Original enactment 1917.] |
| California | 16 | Each child, $10 from State. The county may allow equal or less sum, making $20 possible maximum for 1 child. | State department of social welfare, through its bureau of children's aid, in cooperation with local agencies. | State department of social welfare, through its bureau of children's aid. | Pol. Code, secs. 2283, 2285, 2286, 2287, 2289, 2290. 1913, ch. 323; 1917, ch. 472; 1919, ch. 292; 1921, chs. 603, 890; 1923, ch. 77; 1925, ch. 18; 1927, ch. 49. [Original enactment 1913.] |
| Colorado | 18 | Amount not specified; sufficient to care properly for child at home. Aid may be given in money or supplies. | Juvenile court in counties of more than 100,000 population; county court in other counties. | Board of county commissioners. Copy of report to be filed with State board of charities and corrections. | Comp. Laws 1921, secs. 608–611; 1923, ch. 77, sec. 1. [Original enactment 1913.] |
| | | Amount not specified; sufficient to care properly for child. Aid may be given in supplies, nursing, medical, or other assistance, as court directs. Court may order deserting father to reimburse county for sums expended. | Juvenile or county court | do | 1923, ch. 77, sec. 2. |
| Connecticut | 16 | Weekly allowance: Food: Widow, $2; child—over 14, $1.75; 5 to 14, $1.25; under 5, $1.<br>Fuel, $1.<br>Clothing (for each), $0.50.<br>Rent: Not more than $5.<br>Medical or hospital care: Maximum of $10 a week is allowed any hospital receiving State aid, if exceptional care or treatment is not required.<br>Funeral expenses: Not more than $100.<br>Aid may be given in money or supplies, or both. | State agent, acting in cooperation with local officials. | State agency | 1919, ch. 323; 1921, ch. 247; 1923, ch. 173. [Original enactment 1919.] |
| Delaware | 14 | One child, $12; each additional child, | State mothers' pension commis- | State mothers' pension commis- | 1921, ch. 183; 1923, ch. 200. [Original enactment 1917.] |

| | | | | | |
|---|---|---|---|---|---|
| Delaware | 14 | One child, $12; each additional child, $8. Amount may be increased temporarily in case of sickness or other unusual condition; aid may be in food, clothing, or supplies instead of money. | State mothers' pension commission. | State mothers' pension commission. | 1921, ch. 183; 1923, ch. 200. [Original enactment 1917.] |
| District of Columbia | 16 | Amount not specified; sufficient to insure proper maintenance of child in home with mother. | Board of public welfare | | 44 Stat. 758 (pt. 2). [Original enactment 1926.] |
| Florida | [1] 16 | One child, $25; each additional child, $8. | County commissioners act upon report of county board of public instruction. | Bureau of child welfare and education of State board of health to cooperate with local agencies. | 1919, ch. 7920; 1927, ch. 12000. [Original enactment 1919.] |
| Hawaii | ([2]) | Not specified | County board of child welfare | | 1919, Act 129; 1921, Act 37. [Original enactment 1919.] |
| Idaho | 15 | One child, $10; each additional child, $5. | Probate court of county on approval of county commissioners. | Probate judges to report annually to governor. | 1913, ch. 73; 1915, ch. 135; 1923, ch. 145. [Original enactment 1913.] |
| Illinois | 16 | In counties of less than 300,000: One child, $15; each additional child, $10. In counties of more than 300,000: One child, $25; each additional child, $15. | Juvenile court—if none, county court. | | 1913, pp. 127–130; 1915, pp. 243–245; 1917, pp. 220–222; 1919, pp. 780, 781; 1921, pp. 162–164; 1923, p. 169; 1925, p. 185; 1927, p. 196. [Original enactment 1913, but see 1911, p. 126.] |
| Indiana | 17–F. 16–M. | Daily allowance: Each child, $0.75 | County board of children's guardians. | County board must report to board of State charities. | Burns' Ann. Stat. 1914, secs. 1642–1644; 3657–3664 (sec. 3661 amended by 1919, ch. 95, and by spec. sess. 1920, ch. 9); 1923, ch. 61. [Original enactment 1919.] |
| Iowa | 16 | Weekly allowance: Each child, $2.50 | Juvenile, district or superior court | Annual report to State board of control is required. | Supp. to Code 1913 and Supplemental Supp. 1915, secs. 254–a13 to 254–a20; 1919, ch. 107; 1921, chs. 51, 252; 1923, ch. 57; 1927 chs. 72, 73. [Original enactment 1913.] |
| Kansas | 14 | Maximum for family, $50. May be temporarily increased in case of sickness or unusual condition. Maybe given in money or supplies. | County commissioners | | 1917, ch. 138; 1921, ch. 153. [Original enactment 1915.] |
| Kentucky | 14 | Amount not specified; sufficient to insure proper maintenance of child or children in home with mother. | County children's bureau | State children's bureau | 1928, ch. 17. [Original enactment 1928.] |
| Louisiana | [4] 16 | One child, $15; each additional child, $10; maximum for family, $50. | Juvenile court—if none, district court. | Report to State board of charities and corrections is required. | 1920, act 209; 1928, act 228. [Original enactment 1920.] |
| Maine | 16 | Amount not specified; to be determined by administrative agency. | Municipal board of children's guardians. | State department of public welfare | 1917, ch. 222; 1919, ch. 17, ch. 171, sec. 1; 1927, ch. 48. [Original enactment 1917.] |

[1] Aid to be continued beyond 16. No age limitation specified.
[2] Not specified.
[3] Aid may be granted to 16 under specified conditions.
[4] Aid may be continued to 18 under specified conditions.

MOTHERS' AID LAWS—Continued

| State | Age under which aid may be given | Maximum allowance per month | Administration | State supervision | Law |
|---|---|---|---|---|---|
| Maryland | [1] 14 | One child, $12; second child, $10; each additional child, $6; maximum for family, $40. | County commissioners | | 1916, ch. 670. [Practically inoperative throughout State because of defect in tax provision. Held invalid for Baltimore city.] 1920, ch. 477, amending 1916, ch. 670, and rendering it effective for Anne Arundel County. |
| | Minors. | Such amount as county commissioners deem proper. | do | | 1920, ch. 313, Baltimore County. [Original enactment 1916.] |
| Massachusetts | [1] 14 | Amount not specified; sufficient to enable mother to care properly for child at home. | Boards of public welfare | State department of public welfare | Gen. Laws, 1921, ch. 116, sec. 3; ch. 118, secs. 1–6; 1922, ch. 376; 1926, ch. 241; 1927, ch. 165. [Original enactment 1913.] |
| Michigan | 17 | Weekly allowance: One child, $10; each additional child, $2 [minimum for one child, $2]. | Probate court or circuit court | Report to State welfare department is required. | 1921 (1st extra sess.), No. 16; 1923, No. 294, p. 467. [For procedure under juvenile court act see Comp. Laws, 1915, secs. 2012, 2014, 2015, as amended by 1923, No. 105, p. 145.] [Original enactment 1913.] |
| Minnesota | [1] 14 | One child, $20; each additional child, $15. | Juvenile court | State board of control | Gen. Stat. 1923, as amended by 1925, ch. 355, and 1927, chs. 287, 320, 362. [Original enactment 1913.] |
| Mississippi | 16 | Amount not specified; in no instance more than sufficient to insure proper care, maintenance, and support of child in home with applicant. | Chancery court | | 1928, ch. 84. [Original enactment 1928.] |
| Missouri | 16 | One child, $16; each additional child, $8; maximum for family, $40. | County court. Superintendent of public welfare in certain counties. | State board of charities | 1917, p. 151; 1921, pp. 586–589, secs. 1–3 (applicable to counties not exceeding 50,000); 1927, p. 127 (applicable to counties of less than 350,000 population). |
| | 16 | One child, $16; each additional child, $8. | Juvenile court | | Counties having population of 350,000–700,000 (Jackson County [Kansas City])—1911, p. 120; 1913, p. 146; 1927, p. 127. |
| | 14 | Weekly allowance: Each child, $3.50. In addition to this $25 may be allowed annually for clothing and medical treatment; allowance may be increased with consent and authority of comptroller. | Board of Childrens' Guardians of City of St. Louis. | | City of St. Louis—1911, p. 349. Ordinance 26565 (approved July 8, 1912); 28134 (approved July 14, 1915). [Original enactment 1911, Jackson County only.] |

| | | | | | |
|---|---|---|---|---|---|
| Montana | 16 | One child, $20. If more than 1 child: First child, $15; second child, $10; each additional child, $5; maximum for family, $50. | District court | | 1917, ch. 83; 1919, ch. 198; 1921, ch. 257; 1927, ch. 12. [Original enactment 1915.] |
| Nebraska | 16 | Each child, $10; maximum for family, $50. | Juvenile court | | 1919, ch. 221; 1927, ch. 149. [Original enactment 1913.] |
| Nevada | [1] 16 | One child, $25; two children, $40; maximum for family, $55. | Board of county commissioners | | 1921, ch. 107. [Original enactment 1913.] |
| New Hampshire | 16 | One child, $10; each additional child, $5; in exceptional and emergency cases, additional allowance to each child, $2.50. | State board of education | State board of education administrates. | 1921, ch. 85; 1927, ch. 87. [Original enactment 1913.] |
| New Jersey | 16 | One child, $16; two children, $30; each additional child, $12. | State board of children's guardians, to which family is committed by court of common pleas (by juvenile court in counties of first class). | State board of children's guardians administrates. | 1913, ch. 281; 1915, chs. 118, 238; 1919, ch. 179; 1921, chs. 48, 159; 1922, ch. 105; 1926, ch. 65; 1928, ch. 111. [Original enactment 1913.] |
| New York | 16 | Amount not specified; shall not exceed cost of institutional care. | Local board of child welfare | State board of charities | Gen. Munic. Laws, art. 7-A, secs. 148-155 (being Laws 1915, ch. 228, as amended by 1916, ch. 504; 1917, ch. 551; 1919, ch. 373; 1920, chs. 700, 759; 1923, chs. 730, 731, 733; 1924, ch. 458; 1927, chs. 527, 684); art. 7-B, secs. 156-159a (being Laws 1922, ch. 546, as amended by 1923, chs. 730, 733; 1924, ch. 458; 1927, chs. 527, 684). [Original enactment 1915.] |
| North Carolina | 14 | 1 child, $15; second child, $10; each additional child, $5; maximum for family, $40; Maximum family allowance may be increased in extraordinary circumstances. | Board of county commissioners | State board of charities and public welfare. | 1923, ch. 260; 1925, ch. 292. [Original enactment 1923.] |
| North Dakota | 15 | Each child, $15 [If funds are injudiciously used allowance may be given in supplies, and in such case shall be administered by county child-welfare board or other person appointed by county commissioners.] | County commissioners | Board of administration | 1923, ch. 156, as amended and reenacted by 1925, ch. 165; 1927, ch. 176. [Original enactment 1915.] |
| Ohio | [4] 16 | One child, $35; each additional child, $10. | Juvenile court | | Gen. Code, secs. 1683-2 to 1683-9 (being Laws 1913, pp. 877-879, as amended by 1915, pp. 436-437; 1919, p. 624; 1921, p. 70). [Original enactment 1913.] |
| Oklahoma | 14 | One child, $10; each additional child, $5. | County court | | 1915, ch. 183; 1921, ch. 19. [Original enactment 1915.] |
| Oregon | [3] 14 | One child, $15; each additional child, $10; maximum for family, $60. | Juvenile or county court | | Oreg. Laws 1920 (Olson's), secs. 3322-3342; 1921, ch. 202; 1927, chs. 233, 337. [Original enactment 1913.] |

[1] Aid to be continued beyond 16. No age limitation specified.
[3] Aid may be granted to 16 under specified conditions.
[4] Aid may be continued to 18 under specified conditions.

MOTHERS' AID LAWS—Continued

| State | Age under which aid may be given | Maximum allowance per month | Administration | State supervision | Law |
|---|---|---|---|---|---|
| Pennsylvania | [1] 14 | One child, $20; each additional child, $10. | County board of trustees of mothers' assistance fund. | State department of welfare | 1919, No. 354; 1921, Nos. 425, 433, 438; 1923, Nos. 200, 251. [Law effective only in counties where its provisions are accepted by county commissioners.] [Original enactment 1913.] |
| Rhode Island | [1] 14 | Amount not specified; sufficient to enable mother to care properly for children in their home. | Local board of mothers' aid | State bureau of mothers' aid | 1923, ch. 455; 1925, ch. 663; 1926., ch. 867. [Original enactment 1923.] |
| South Dakota | 16 | One child, $22.50; each additional child, $10. Pregnant woman may be allowed $22.50 a month and, in addition, necessary medical, surgical, and hospital services and supplies. | County court | | Rev. Code, 1919, secs. 10023–10030. 1921, ch. 291. [Original enactment 1913.] |
| Tennessee | 17 | One child, $15; each additional child, $10. | Juvenile or county court | | 1921, ch. 104; 1923, ch. 67. [Original enactment 1915.] |
| Texas | 16 | 1 child, $12; 2 children, $18; each additional child, $4. | Board of county commissioners | | 1917, ch. 120. [Original enactment 1917.] |
| Utah | 16 | Maximum for family, $40 | County commissioners | | 1919, ch. 77; 1919 (spec. sess.), ch. 12. [Original enactment 1913.] |
| Vermont | 16 | Weekly allowance, 1 child, $2 | State department of public welfare | State department of public welfare, administrates. | Gen. Laws, 1917, secs. 7308–7312; 1921, No. 218. [Original enactment 1917.] |
| Virginia | 16 | Amount not specified. Within limits of any appropriation made for such purposes. | County or city board of public welfare—if none, juvenile court and domestic relations court. | State board of public welfare | 1922, ch. 488. [Original enactment 1918.] |
| Washington | 15 | 1 child, $15; each additional child, $5 | Juvenile or superior court | | 1915, ch. 135; 1919, ch. 103. [Original enactment 1913.] |
| West Virginia | [1] 14 | Maximum for family, $45 | County commissioners designated as county court. | | 1917, ch. 46; 1923, chs. 28, 60. [Original enactment 1915.] |
| Wisconsin | [1] 14 | 1 child [except in emergency cases, when amount is left to discretion of court], $15; each additional child, $10. Above limitation does not apply to expectant mothers; and aid allowed may be in form of supplies, nursing, or medical or other assistance. | Juvenile or county court | State board of control | Stat. 1919, secs. 48.33 (1) to 48.33 (10); sec. 20.17 (13); 1921, ch. 86; 1923, ch. 83; 1925, ch. 426; 1927, chs. 273, 374. [Original enactment 1913.] |
| Wyoming | 14 | 1 child, $20; each additional child, $10. | Board of county commissioners | | 1915, ch. 32; 1917, ch. 38. [Original enactment 1915.] |

[1] Aid may be granted to 16 under specified conditions.

## Constitutionality of Mothers' Pension Laws

MOTHERS' pension laws and acts providing public aid to children in their own homes are constitutional and valid. The courts in declaring the laws valid have stated that the object of this type of legislation was to better the care and training, mentally and physically, of the dependent children of indigent mothers and that the legislation declares that the policy of the State favors the elimination of an environment which has a tendency to weaken the moral fiber of those of tender years. An early act of Arizona (1914) which attempted to set up a system of old-age and mothers' pensions and to abolish almshouses was held unconstitutional for technical reasons.[13] The Arizona law has since been replaced by a more modern mothers' pension law. Mothers' pension laws supplement the poor laws of the State. They do not attempt to abolish State institutions and replace them by a pension system.

The following list of decisions of courts contains a discussion of the principles, constitutionality, and application of several of the State mothers' pension laws:

Arizona: State Board of Control *v.* Buckstegge, 18 Ariz. 277, 158 Pac. 837.

California: Sacramento Orphanage and Children's Home *v.* Chambers, 25 Calif. App. 536,144 Pac. 317.

Illinois: People *v.* Cairo V. & C. Ry. Co., 266 Ill. 557, 107 N. E. 779; People *v.* Chicago, L. S. & E. Ry. Co., 270 Ill. 477, 110 N. E. 720; People *v.* N. J. Sandberg Co., 282 Ill. 245, 118 N. E. 469; People *v.* Klee, 282 Ill. 440, 118 N. E. 754; People *v.* Cleveland, C., C. & St. L. R. Co., 295 Ill. 214, 129 N. E. 164; People *v.* Chicago & E. I. R. Co., 295 Ill. 284, 129 N. E. 167; People *v.* Chicago & E. I. R. Co., 296 Ill. 246, 129 N. E. 846; People *v.* Millard, 307 Ill. 556, 139 N. E. 113; In re Heller, 219 Ill. App. 226.

Iowa: In re Application for Support of Minor Children, or Debrot *v.* Marion County, 164 Iowa, 208, 145 N. W. 467; Adams County *v.* Maxwell, 202 Iowa 1327, 212 N. W. 152.

Massachusetts: Soper *v.* Wheeler, 239 Mass. 327, 132 N. E. 46.

Minnesota: State *v.* Klasen, 123 Minn. 382, 143 N. W. 984; In re Koopman, 146 Minn. 36, 177 N. W. 777; State *v.* Preus, 147 Minn. 125, 179 N. W. 725.

Montana: State *v.* District Court of Second Judicial Dist. in and for Silver Bow County, 62 Mont. 275, 204 Pac. 600.

Nebraska: In re Rumsey or Rumsey *v.* Saline County, 102 Nebr. 302, 167 N. W. 66.

North Dakota: Cass County *v.* Nixon, 35 N. Dak. 601, 161 N. W. 204; Kost *v.* Sheridan County, 46 N. Dak. 75, 179 N. W. 703; Pierce County *v.* City of Rugby, 47 N. Dak. 301, 181 N. W. 954; City of Bismark *v.* Burleigh County. 49 N. Dak. 205, 190 N. W. 811; In re Walker, 49 N. Dak. 682, 193 N. W. 250.

Oregon: Finley *v.* Marion County, 81 Oreg. 294, 159 Pac. 557; In re Wolfe, 81 Oreg. 297, 159 Pac. 558; Buster *v.* Marion County, 84 Oreg. 624, 165 Pac. 1168; Badura *v.* Multnomah County, 87 Oreg. 446, 170 Pac. 938; In re Sharp, 88 Oreg. 594, 171 Pac. 586.

Pennsylvania: Commonwealth *v.* Powell, 256 Pa. 470, 100 Atl. 964; In re Wolf's Estate, 58 Pa. Super. Ct. 260.

South Dakota: In re Stone, 48 S. Dak. 428, 204 N. W. 946.

Tennessee: State *v.* Trotter, 152 Tenn. 217, 276 S. W. 867.

Utah: Denver & R. G. R. Co. *v.* Grand County, 51 Utah, 294, 170 Pac. 74; Startup *v.* Harmon, 59 Utah 329, 203 Pac. 637.

Washington: In re Snyder, 93 Wash. 59, 160 Pac. 12.

The Washington case, In re Snyder, was taken to the Supreme Court of the United States and affirmed by that court in a per curiam decision on December 9, 1918, on the authority of the following cases: Magoun *v.* Illinois Trust & Savings Bank, 170 U. S. 283, 293; Atchison, Topeka & Santa Fe Ry. Co. *v.* Matthews, 174 U. S. 96, 103; Clark *v.* Kansas City, 176 U. S. 114, 119; Lindsley *v.* Natural

[13] State Board of Control *v.* Buckstegge, 18 Ariz. 277, 158 Pac. 837.

Carbonic Gas Co., 220 U. S. 61, 78; Mrs. Rose Snyder *v.* King County, Washington et al., 248 U. S. 539.

The following act, which provides care for dependent children in the District of Columbia, passed by Congress in 1926, is reproduced for the purpose of giving an example of the type of legislation passed on this subject.[14]

Whenever the parent of a child under the age of 16 years is unable to provide for the proper care of such child in his own home, the mother or guardian of such child may make application to the board of public welfare of the District of Columbia, hereinafter called the board, for the benefits conferred by this act, which application shall be referred to a standing subcommittee of the board, at least one of whom shall be a woman: *Provided*, That such applicant has been a bona fide resident of the District of Columbia for one year preceding such application and that she is a citizen of the United States or has made application to become a citizen.

SEC. 2. The board shall thereupon make an investigation for the purpose of securing the following information:

*a*. Whether the mother or guardian is a proper person to have the custody and care of the child.

*b*. Whether the home is a satisfactory place for the training and rearing of the child.

*c*. What resources may be available for the complete or partial maintenance of the child, including the full amount, if any, of real and personal property owned by the parent or held in trust for the child; whether there are any persons or organizations legally obligated to assist in the support of the child.

*d*. Whether legal steps have been taken to compel the father of the child, if he be living, to provide support when he wilfully refuses to do so and with what result.

*e*. What amount of aid is needed to keep the child in its own home and to provide proper care.

SEC. 3. The board shall make written findings based upon its investigations. If it shall find affirmatively on subsections *a*, *b*, and *d* of section 2, and further that the income from, or the amount of, real and personal property owned by the parent or held in trust for the child, if any, is not of an amount or character which makes the giving of public aid inappropriate or unnecessary, the board may then make an order for a monthly allowance sufficient to insure the proper maintenance of the child in the home with the mother and, if it deems necessary, may impose such conditions upon the granting of the allowance as will promote the welfare of the child. The allowance shall be discontinued whenever the mother ceases to be a resident of the District of Columbia.

SEC. 4. The board may award an allowance from month to month or for a continuous period. It shall review all allowances at regular intervals and in no case shall an allowance be continued for more than six months without such review. Any allowance may be increased or decreased in amount, or discontinued, and the board may alter or amend the conditions upon which the allowance was previously granted upon a showing that the welfare of the child, and the protection of the public interest demands such change, discontinuance, or amendment after reasonable notice has been given to the mother of the child.

SEC. 5. The board shall cause every home for which an allowance is made to be visited by its representative as often as may be necessary to observe the conditions which obtain in the home, the care which the child is receiving, and to offer such friendly counsel and advice as may be helpful to the mother and the child.

SEC. 6. The board shall keep on file a full record of each applicant for, or recipient of, assistance under this act, including the reports of investigations, correspondence and other pertinent information, together with the orders of the board in each case.

SEC. 7. The board shall make such reasonable rules and regulations as may be necessary to the proper administration of this act.

SEC. 8. Any person who attempts to obtain, or obtains, by false representations, fraud, or deceit, any allowance under this act, or who receives any allowance knowing it to have been fraudulently obtained, or who aids or assists any person in obtaining or attempting to obtain an allowance by fraud, shall be punished

[14] U. S. Stat. at Large, 758.

by a fine of not more than $200 or imprisonment for not more than twelve months, or both.

SEC. 9. The words "child" and "parent" where used in this act shall be interpreted to include the plural.

SEC. 10. That in order to carry out the provisions of this act there is authorized to be appropriated for the fiscal year ending June 30, 1927, the sum of $100,000, payable from the revenues of the District of Columbia, and for the fiscal year ending June 30, 1928, and annually thereafter, the Commissioners of the District of Columbia shall include in the estimates of appropriations for said District such amount as may be necessary for this purpose. The Commissioners of the District of Columbia, upon nomination by the board, shall have power to appoint a supervisor, and such investigators, stenographers, and clerical assistants as are necessary to administer this act, at such salaries as may be fixed for similar services by the provisions of the classification act of 1923. Such employees may be removed by the Commissioners upon recommendation of the board.

## Widows', Orphans', and Old-Age Contributory Pensions in England

DIFFERENT sections of the English act under which pensions for widows, orphans, and aged are paid came into effect at different times. Widows' and orphans' pensions began January 4, 1926; unrestricted noncontributory old-age pensions for insured persons who reached the age of 70 before January 2, 1928, began on July, 2, 1926; and contributory old-age pensions at the age of 65 began January 2, 1928. The year ending March 31, 1929, was therefore the first fiscal year in which the act had been in full operation. The tenth annual report of the Ministry of Health gives the following data as to the number of beneficiaries and the amounts paid out under the act in England during that year:

On March 31, 1929, the number of persons in England to or in respect of whom pensions under or by virtue of the contributory pensions act were being paid had reached a total of 1,159,667, comprising 200,292 widows, 216,727 children (including orphans), 455,271 persons between the ages of 65 and 70, and 287,377 persons over the age of 70.

For the year ending March 31, 1929, the amount paid out in widows' pensions was £7,205,500 ($35,090,785), in orphans' pensions, £235,500 ($1,146,885), and in contributory pensions to persons between the ages of 65 and 70, £11,482,000 ($55,917,340), a total of £18,923,000 ($92,155,010). During the same year the net contributions from the sale of stamps amounted to £19,796,000 ($96,406,520), and other receipts to £1,171,500 ($5,705,205), making a net income of £20,967,500 ($102,111,725).

## National Provident Fund of New Zealand

NEW ZEALAND, which has a rather extensive system of public pensions for the old, for widows, for war veterans, for victims of miners' phthisis, for the blind, and for sufferers from some public disasters, has also a system, known as the National Provident Fund, through which persons of limited income are aided to secure for themselves certain benefits during working years, and an annuity at 60. The fund, which was established by legislation in 1910 and became operative in 1911, is open to any New Zealander between the ages

of 16 and 60 whose income for the three years before his entry has not exceeded £300 ($1,460) a year. No medical examination is required and the method of entry is simple, the applicant merely having to fill out a prescribed form and pay in his contribution. The following benefits are provided.

1. After contributing for 12 months, a payment not exceeding £6 [$29.20] for medical attendance and nursing on the birth of a contributor's child or children.
2. After contributing for 5 years, an allowance, after 3 months' incapacity to work, of 7s. 6d. [$1.82] per week for each child of a contributor under 14 years of age; payable independent of any allowances due from friendly societies. No contributions payable while in receipt of incapacity allowance.
3. After contributing for 5 years, an allowance, on the death of a contributor, of 7s. 6d. [$1.82] per week for each child under 14 years of age, and 7s. 6d. for the widow so long as any child is under 14 years of age.
4. On reaching age 60, a pension of 10s., 20s., 30s., or 40s. [$2.43, $4.86, $7.30, or $9.73] per week, according to the scale of contributions. The receipt of a pension under the National Provident Fund act does not affect a person's claim to the old-age pension under the pension act. (New Zealand Official Yearbook, 1929, p. 664.)

The contribution for each 10s. ($2.43) of weekly pension varies from 9d. (18 cents) a week for persons joining at the age of 16 to 9s. 4d. ($2.27) a week for those joining at age 50. If a contributor leaves the system or dies before becoming pensionable, all contributions are returned, less any benefits which may have been given. The fund is guaranteed by the State, which subsidizes it to the extent of one-fourth of the contributions paid in.

The scope of the act has been extended several times. In 1914 local authorities were empowered to enroll their employees in the fund, and in 1925 provision was made for the payment out of this fund of the retiring allowances of nurses and other members of the permanent staffs of hospital boards. In 1926 it was made obligatory on hospital boards to contribute to the fund on behalf of their permanent officers, thus placing these boards on a different footing from other local authorities, who are permitted but not obliged to contribute for the benefit of their employees. In 1927 legislation was passed to facilitate schemes of contribution by private employers on behalf of their employees, permitting them to make such contributions in respect of persons who are over 50 or in receipt of incomes exceeding £300 ($1,460) a year, and who would, therefore, except for this special legislation, be ineligible. Along a different line of development, a provision was inserted in 1916 by which members of approved friendly societies were granted maternity allowances and offered annuities on reduced terms.

According to the latest report of the director of the fund, on December 31, 1928, the numbers contributing for the different pension rates were as follows:

| Pension rate | Males | Females | Total |
|---|---|---|---|
| 10s. ($2.43) a week | 20,381 | 703 | 21,084 |
| 20s. ($4.87) a week | 2,666 | 298 | 2,964 |
| 30s. ($7.30) a week | 265 | 46 | 311 |
| 40s. ($9.73) a week | 394 | 68 | 462 |
| Other rates | 3,661 | 2,388 | 6,049 |
| Total | 27,367 | 3,503 | 30,870 |

Contributions received during the year amounted to £234,821 ($1,143,578), interest to £115,770 ($563,800), and the Government contribution to £59,125 ($287,939). Claims for maternity allowances amounting to £43,422 ($211,465) were paid, of which the greater portion, £36,186 ($176,226), was for claims from members of approved friendly societies. Retirement allowances for the year amounted to £19,941 ($97,112), incapacity allowances to £3,560 ($17,337), allowances on account of widows and children to £9,429 ($45,919). At the close of the year the amount in the fund was £2,275,682 ($11,082,571).

## Maternity Insurance in Spain

THE March 24, 1929, issue of the Gaceta de Madrid contains the text of a decree (No. 938) establishing compulsory maternity insurance in Spain.

The purpose of this new branch of insurance is to provide medical attendance for women during confinement, to supply them with the means of subsistence during the period of compulsory rest preceding and following confinement, and to provide for the creation and maintenance of maternity and welfare institutions.

*Scope.*—All women who are wage earners or salaried employees and subject to compulsory old-age pension insurance shall be beneficiaries of this insurance regardless of their age, nationality, or civil status.

*Benefits.*—The benefits include medical and pharmaceutical attention and cash benefits amounting to 15 pesetas ($2.18) for each quarterly insurance contribution paid by the woman during the three years preceding the first week of the rest period, regardless of the number of confinements during the three years. The cash benefit is paid for six weeks after confinement, but the right to receive it during the six weeks preceding confinement is conditional upon the production of a certificate by the doctor or midwife stating that the confinement will probably take place within this period. In order to be entitled to cash benefits, the insured person must have been insured for 18 months and have paid the contributions due for the periods during which she worked.

*Funds.*—The necessary funds of the scheme are provided by an annual contribution of 7½ pesetas ($1.09) by each insured woman between the ages of 16 and 50; by a contribution from the employer of 7½ pesetas for every insured woman in his service; by various State subsidies, including an allowance of 50 pesetas ($7.25) for each confinement, an annual contribution to the National Maternity and Infant Welfare Fund, and a subsidy to provide a nursing bonus, and by various contributions from the municipalities.

The National Welfare Institution and its auxiliary funds are responsible for the administration of maternity insurance. A sum representing 5 per cent of the contributions of insured persons and employers shall be used for administration expenses.

# COOPERATION

## First Institute on Consumers' Cooperation

FOR the past five years the farmers' cooperative organizations of the United States have been holding an annual institute at which problems relating to their field are discussed and studied. For the first time a consumers' cooperative institute was called for the week of July 28, 1929, by the Cooperative League.[1]

The institute was held at Brookwood College.

One of the subjects covered was that of the problems of organizing and administering a consumers' cooperative society. The points discussed ranged from the position of the employee in the cooperative society and the duties of the directors and manager to the special difficulties created by the disloyal member, chain-store competition, and the extension of credit. Another course dealt with the history, theory, and principles of consumers' cooperation.

Special lectures dealt with the relation of the consumers' cooperative movement to the trade-unions and other workers' movements; the New York housing situation and the results obtained through cooperative housing; international cooperation; economics of the consumers' movement; and the special difficulties confronting consumers' cooperation in America.

One session was devoted to the new Eastern Cooperative Wholesale and its problems. It was brought out at this session that the wholesale is already acting as purchasing agent for some 23 cooperative societies, to an amount of $15,000 per month. The business done in some grocery products is already so large as to enable the wholesale to have these packed under its own label, after careful laboratory tests have been made to insure the quality of the product. Goods now being sold under the label include 2 grades of coffee, 2 grades of flour, 2 grades of malt sirup, macaroni, spaghetti, noodles, and jelly powder. It is expected within a few weeks to add canned soups, spices, extracts, rolled oats, rice, and tea.

The good attendance and enthusiasm shown lead to the hope that the consumers' institute may, like that of the farm groups, become an annual occurrence.

## Federal Farm Board and Its Work

THE special session of the Seventy-first Congress passed an act (Public No. 10), approved June 15, 1929, establishing a Federal Farm Board of eight members representing the major agricultural commodities. The purpose of the act is declared to be "to promote the effective merchandising of agricultural commodities in interstate and foreign commerce, so that the industry of agriculture will be

[1] Data are from news release of the Cooperative League, New York.

placed on a basis of economic equality with other industries, and to that end to protect, control, and stabilize the currents of interstate and foreign commerce in the marketing of agricultural commodities and their food products—

"(1) By minimizing speculation.

"(2) By preventing inefficient and wasteful methods of distribution.

"(3) By encouraging the organization of producers into effective associations or corporations under their own control for greater unity of effort in marketing and by promoting the establishment and financing of a farm marketing system of producer-owned and producer-controlled cooperative associations and other agencies.

"(4) By aiding in preventing and controlling surpluses in any agricultural commodity, through orderly production and distribution, so as to maintain advantageous domestic markets and prevent such surpluses from causing undue and excessive fluctuations or depressions in prices for the commodity."

### Provisions of the Law

THE board is charged with the duties of promoting education in the principles and practices of cooperative marketing, of encouraging the formation and development of effective cooperative marketing organizations, and of investigating conditions of overproduction with a view to preventing such overproduction. It is also authorized to make investigations and reports of "land utilization for agricultural purposes; reduction of the acreage of unprofitable marginal lands in cultivation; methods of expanding markets at home and abroad for agricultural commodities and food products thereof; methods of developing by-products of and new uses for agricultural commodities; and transportation conditions and their effect upon the marketing of agricultural commodities."

In addition to providing $1,500,000 for expenses, the act also establishes a revolving fund of $500,000,000. The board is authorized to make loans to cooperative associations for the purpose of assisting in the effective merchandising of agricultural commodities and their food products; the construction, purchase, or lease of marketing facilities for preparation, handling, storing, processing, or merchandising agricultural commodities; the formation of clearing-house associations; educating the producers in the advantages of cooperative marketing; and enabling a cooperative association applying for a loan to advance to its members a greater share of the market price of the commodity than is now possible. In making such loans, however, the board must assure itself that the organization, management, and business policies of the borrowing association are "such as to insure the reasonable safety of the loan." No loan may be granted for an amount of more than 80 per cent of the value of the facilities to be constructed or purchased, nor unless the purchase price or rental to be paid is reasonable, nor unless there are no suitable existing facilities that may be acquired at a reasonable rate.

The loans are to be repaid over a period of not more than 20 years.

The rate of interest upon loans is to be a rate equal to the lowest rate of yield of any Government obligation issued prior to April 6,

1916 (except postal-savings bonds), and outstanding at the time of the loan. In no case, however, may the rate exceed 4 per cent per annum on the unpaid principal.

The act also provides for the recognition of "stabilization corporations," if the board finds that the marketing situation requires it, and if the corporation can meet certain requirements as to membership and cooperative policy. The board is authorized to invite cooperative associations dealing in any particular commodity to appoint an advisory committee for that commodity, consisting of seven members, to represent that commodity before the board.

An interesting provision of the law authorizes the board to enter into agreements for the insurance of cooperative associations against loss resulting from a decline in the price of the commodities handled.

### Constitution and Work of Board

ACTING under this authorization, the President appointed the members of the board, selecting men prominently identified with the cooperative marketing of the various agricultural commodities. The one exception to this was the chairman.

In a speech made before the American Institute of Cooperation at Baton Rouge, La., July 30, 1929,[2] the chairman of the board enunciated the board's policies. Its major policy, he stated, would be that of furthering the expansion and strengthening of the cooperative movement. He emphasized that the board will neither buy nor sell "any commodity, agricultural or otherwise." Its first act will be to further the activities of agencies already established in the cooperative field and to encourage the formation of large-scale central cooperative organizations.

The board, he stated, regards its function as one of a long-time constructive program rather than one of dealing simply with emergencies. "If we confine our efforts to dealing with those in distress, the probabilities are we will find little time to remove the causes of distress, which after all is the more satisfactory solution. We realize keenly the necessity of prompt and adequate assistance, but we realize equally keenly that any action which the board takes must be sound and for the permanent betterment of agriculture."

Discussion in the farmers' publications indicates that some agricultural groups look upon the powers of the board not without some misgivings. Already two large-scale marketing organizations, the United Fruit Growers of America and the Farmers' National Grain Corporation, are planned to be constituted under the act. The latter seems to be arousing some apprehension among the grain producers. The Nebraska Union Farmer, in its issue of August 28, 1929, makes the following editorial comment:

> This apprehension arises from the fear that farmers' grain-marketing cooperatives, the farmers' elevators and farmer-controlled sales agencies in the central markets, will be swallowed up in this National Grain Corporation and become part of a top-down system dominated by a political board, answerable not to farmers, but to those who farm the farmers.
>
> Such support as many of these farm leaders are giving the grain plan of the Farm Board is based, we are safe in saying, upon fear of running counter to governmental action and of retaliatory measures the Farm Board may take,

[2] Press release of Federal Farm Board, dated July 31, 1929.

rather than upon regard for the plan itself. They say the board is a fact, that it is going to function, and that if the present cooperatives do not go along with it, they will be displaced by others set up by the Federal Farm Board.

Some of these farm leaders who are apprehensive of the National Grain Corporation are going to seek concessions from the Farm Board to make the plan more democratic and less likely to destroy the identity of the farmers' cooperatives. But whatever concessions are coaxed from the board, throwing the grain-marketing cooperatives of the country together from the top must inevitably result in failure or oppressive bureaucracy.

This point was covered by Chairman Legge in the speech already mentioned. In it he stated:

> Immediately we are asked: Would the development of such large-scale organizations mean that the farmers should abandon or do away with their local associations? We can not see any tendency in that direction. On the contrary, such agencies would help to build up and improve the condition of each and every cooperative organization now in existence. Always bear in mind that any organization of this kind would be owned and controlled by the cooperatives. It would be the farmers' organization, producer owned and producer controlled, working solely in the interests of the producers.

The first loan make by the board under the act is stated to have been one of $300,000, made to the Florida United Growers and the Florida Citrus Growers' Exchange, to equip certain citrus-packing plants in that State with "heating and precooling facilities, to enable the growers to meet Government regulations in controlling the Mediterranean fruit fly and thus to get their crop of this year onto the market." [3] This loan, it is stated, is considered as an "emergency loan to meet an emergency marketing situation." [3]

## Development of Consumers' Cooperation in 28 Countries

AN INTERNATIONAL comparison of the consumers' cooperative movement in 28 countries is given in the July 6, 1929, issue of Schweiz. Konsum-Verein (Basel, Switzerland). These data have been reproduced in the table following, and computations have been made from them showing the development of the movement in each country in proportion to patronage and in patronage by the members.

As the table shows, the cooperative movement in these 28 countries has attracted some 34,000,000 members. By far the largest number of societies is found in Russia, and that country also leads as regards combined annual sales. Cooperative sales of more than $100,000,000 are shown for France, Germany, and Great Britain.

The greatest cooperative development in proportion to population is found in Finland, where cooperators form about one-eighth of the population. In four other countries, however (Great Britain, Hungary, Russia, and Switzerland), the cooperative membership forms 10 per cent or more of the total population. In Australia, Canada, Spain, the United States, and Yugoslavia, cooperators number less than 1 per cent.

More persons are supplied through cooperative sources than the above figures would indicate. In some countries only one person from a household is admitted to membership, but the whole family

[3] Equity Union Exchange (Greenville, Ill.), Aug. 21, 1929.

receives its supplies from the store. The total number of persons supplied through cooperative channels in some countries, therefore, reaches a high proportion of the population.

As is seen by the table the United States occupies a very low position as regards cooperative development. The figures shown in the table, however, do not represent a true picture, since they cover only the societies affiliated with the central educational union, which form only a small part of the total number of consumers' societies in this country. Undoubtedly the cooperative movement is weak and lagging in the United States as compared with other countries, but not to the extent shown by the figures in the table. On the basis of data collected by the United States Bureau of Labor Statistics in 1925 it was estimated that this country had a consumers' cooperative membership of more than 500,000 persons, nearly seven times the number shown in the table. The average sales per member as shown in that study were $334, as against $193 shown below.

Prices have a direct effect upon the annual amount of purchases. It would naturally be expected, therefore, that countries of relatively high prices, like Canada, Australia, and the United States, would show a higher volume of purchases by the consumer than the countries of Europe and, except in the case of the United States, this is shown in the table. Iceland shows a rather surprisingly large patronage by the members of the cooperative societies.

TABLE 1.—MEMBERSHIP AND SALES OF CONSUMERS' COOPERATIVE SOCIETIES IN VARIOUS COUNTRIES IN 1928

[Conversions into U. S. currency on basis of Swiss franc=19.3 cents]

| Country | Population of country | Number of consumers' cooperative societies | Cooperative membership | | Annual sales | |
|---|---|---|---|---|---|---|
| | | | Number of members | Per cent of total population | Amount | Average per member |
| Australia | 6,540,738 | 55 | 55,752 | 0.85 | $18,208,032 | $327 |
| Austria | 6,534,481 | 175 | 342,069 | 5.23 | 22,241,154 | 65 |
| Belgium | 7,465,782 | 110 | 420,282 | 5.63 | 26,253,556 | 62 |
| Bulgaria | 5,483,125 | 69 | 61,767 | 1.13 | 3,252,762 | 53 |
| Canada | 9,364,200 | 25 | 8,914 | .10 | 4,486,032 | 503 |
| Czechoslovakia | 13,612,006 | 1,058 | 775,617 | 5.70 | 55,075,005 | 71 |
| Denmark | 3,434,555 | 1,785 | 321,500 | 9.36 | 68,806,003 | 214 |
| Estonia | 1,107,059 | 267 | 69,064 | 6.24 | 7,453,370 | 108 |
| Finland | 3,364,807 | 535 | 411,716 | 12.24 | 71,341,765 | 173 |
| France | 40,743,851 | 3,388 | 2,212,132 | 5.43 | 129,862,940 | 59 |
| Germany | 63,180,619 | 1,361 | 3,685,545 | 5.83 | 250,294,284 | 68 |
| Great Britain and Ireland | 47,148,834 | 1,267 | 5,579,038 | 11.83 | 973,786,451 | 175 |
| Hungary | 7,984,558 | 1,763 | 855,744 | 10.72 | 24,777,104 | 29 |
| Iceland | 94,690 | 38 | 7,082 | 7.48 | 2,866,891 | 405 |
| Italy | 38,755,576 | 3,333 | 826,845 | 2.13 | 84,875,561 | 103 |
| Latvia | 1,844,805 | 302 | 54,475 | 2.95 | 4,537,433 | 83 |
| Lithuania | 2,115,566 | 318 | 37,641 | 1.78 | 2,050,317 | 54 |
| Netherlands | 6,865,314 | 227 | 202,964 | 2.96 | 22,485,276 | 111 |
| Norway | 2,649,775 | 439 | 100,438 | 3.79 | 26,580,084 | 265 |
| Poland | 27,176,717 | 2,658 | 671,807 | 2.47 | 25,792,695 | 38 |
| Portugal | 5,621,977 | 180 | 85,572 | 1.52 | 5,297,445 | 62 |
| Rumania | 16,262,177 | 2,570 | 304,427 | 1.87 | 10,627,004 | 35 |
| Russia | 145,493,000 | 28,616 | 15,991,000 | 10.99 | 2,810,733,884 | 176 |
| Spain | 21,338,381 | 188 | 26,821 | .13 | 5,600,215 | 209 |
| Sweden | 5,904,489 | 824 | 365,894 | 6.20 | 76,891,377 | 210 |
| Switzerland | 3,380,320 | 826 | 375,207 | 11.10 | 61,062,418 | 163 |
| United States | 105,710,620 | 155 | 77,826 | .07 | 15,025,629 | 193 |
| Yugoslavia | 11,996,791 | 175 | 86,256 | .72 | 6,159,813 | 71 |
| Total | 611,174,813 | 52,707 | 34,013,395 | 5.56 | 4,816,424,500 | 142 |

Table 2 shows the business of the wholesale societies in 18 countries. Where there were two or more such societies in a single country, the initials of each society's name are given.

TABLE 2.—ANNUAL BUSINESS OF COOPERATIVE WHOLESALE SOCIETIES OF SPECIFIED COUNTRIES, 1927 AND 1928

[Conversions into U. S. currency on basis of Swiss franc=19.3 cents]

| Country and wholesale society | 1927 | 1928 |
|---|---|---|
| Austria | $10,742,282 | $12,291,059 |
| Belgium | 5,901,800 | 6,281,600 |
| Bulgaria | 1,909,437 | 2,072,692 |
| Czechoslovakia: | | |
| G. E. C | 8,018,304 | 8,572,677 |
| V. D. P | 16,673,132 | 16,978,743 |
| Denmark | 35,724,261 | 36,037,684 |
| Finland: | | |
| S. O. K | 21,418,685 | 25,336,389 |
| O. T. K | 17,438,764 | 20,542,570 |
| France | 21,879,954 | 25,700,489 |
| Germany | 88,827,122 | 106,254,573 |
| Great Britain: | | |
| English Cooperative Wholesale | 423,241,691 | 425,686,965 |
| Scottish Cooperative Wholesale | 86,312,897 | [1] 76,625,719 |
| Italy | ([2]) | 1,784,989 |
| Latvia | 199,971 | 378,367 |
| Netherlands | 6,303,953 | 7,052,729 |
| Norway | 6,555,598 | 7,076,521 |
| Poland: Z. S. S. R | 9,003,839 | 10,130,633 |
| Spain: Union of the North | 495,371 | 613,528 |
| Sweden | 32,178,726 | 36,336,965 |
| Switzerland: | | |
| V. S. K | 26,822,155 | 28,843,878 |
| Concordia | 938,140 | 884,753 |
| United States: | | |
| Farmers' Union State Exchange, Omaha, Nebr | 1,621,053 | 1,621,678 |
| Cooperative Central Exchange | 1,257,822 | 1,520,992 |
| Grange Cooperative Wholesale | 106,062 | 110,092 |
| Total | 823,571,019 | 858,736,285 |

[1] 45 weeks' operation only. [2] No data.

## Consumers' Cooperation in London

A REPORT issued by the London Cooperative Society describes the development of the consumers' cooperative movement in London.[4] That city was for long regarded as a place in which it was impossible for cooperation to succeed. As early as 1821 a cooperative society was started there. This society had an ambitious program, but it found existence too hard and faded out after only a short period of operation. Three years later the London Cooperative Society was formed. As the years passed, many societies were started in various parts of the city, some of which succeeded but most of which did not. The causes of failures of these early societies are cited as religious differences, lack of legal security, and the refusal of the housewives to confine their trading to one shop.

Between 1830 and 1833, at least 44 societies were formed in the metropolitan district. The report states that these societies insisted upon the provision of pure and unadulterated foods and cash trading. Much earnest thought and endeavor went into these ventures. The secretaries were usually "unlettered and untutored men" to whom the writing of minutes and the keeping of accounts were extremely

[4] Brown, W. Henry: A Century of London Cooperation. London, Education Committee of London Cooperative Society (Ltd.), 1928.

difficult; for in those days practically 85 per cent of the population were illiterate and even in 1844 industrial workers "could rarely read and could far more rarely write."

In 1869 the "first of the modern series" of cooperative congresses was held. At this congress, held in London, were present delegates from 15 London societies. (Only one of these still remains in existence.) Out of this congress the present Cooperative Union evolved.

In 1875 another cooperative congress was held in London. This was marked by the presence of a delegation from the parliamentary committee of the Trade Union Congress, a practice which has remained unbroken ever since.

Some of the legal disabilities under which cooperative societies were laboring were removed by the passage, in 1852, of the industrial and provident societies act. The passage of an amended act in 1862 gave additional impetus to the formation of a large number of cooperative societies, many of which were doomed to failure.

> Sufficient has been written to indicate the variety of societies started in London; and all coming to a similar ending. Most of them failed owing to the enthusiasts who knew little of business, opening shops with inadequate capital, unsuitable stocks, uninformed service, and the inefficiency which came naturally from premature efforts to establish new business. In some cases the committees were badly treated by managers in whom they trusted; in many the wives were not impressed by the shopping facilities provided by their husbands. The dividend drew for a time; but when the dividend disappeared the society generally followed into obscurity. Following the congress of 1869 there was a greater care in getting capital before starting, but the following 10 years bring the same story of lost hopes. The veterans did not disappear. Men who had lost their savings in one society would venture again, making great sacrifices with little resources.

Up to this time the cooperative stores in the metropolitan area had been started mainly by the workingmen who were acquainted with one another in the religious, temperance, or friendly society movements, while some were aided by public-spirited people who recognized the educational value of cooperative effort. About 1866, however, the retail field was invaded by stores of the middle and professional classes. Civil servants, officers of the Army and Navy, barristers, doctors, and clergymen saw the economic merits of the cooperative system. Stores were established to which, for many years, only the civil service employees and professional people were admitted, and at which goods were sold at rates only high enough to cover the estimated operating expenses.

According to the report, "the system of the civil service stores brought a new competitor into London, intensified the hostility of leaders of commerce against all forms of association, and confused the public mind as to which was the genuine cooperation." Pressure was brought to bear by the merchants looking to the enforced closing of these civil service stores, but in vain, and the stores are still in existence. Other attempts included the formation of a wholesale society by the retail grocers. Because of the opposition of the regular wholesalers this had to be abandoned.

Although many genuine cooperative societies passed out of existence during the course of years, some remained, even though operating under difficulties. Their capital was so meager as to seem "almost incredible" in these days. The migratory habits of the workers who were members of the store were also against cooperative success, for upon moving out of the store district they were lost to cooperation.

Some societies persisted, however, and early in the twentieth century there were in operation in the London area—in Stratford, West London, Edmonton, and a few other sections—strong societies. The idea of the amalgamation of these societies was put forward in 1906, and some combinations were actually made shortly after. In 1910, however, began the real mobilization of the cooperative forces of London. In 1913 a meeting was held at which 12 societies were represented, and out of this grew a joint committee of these societies. During the war this committee represented the London societies on matters relating to prices, food control, etc., before the Government departments.

In 1920 the societies of Edmonton and Stratford amalgamated, forming the London Cooperative Society. Later the societies at West London, Hendon, and Willesden, and a few of the branches of the Staines society also amalgamated with the London Society.

At present the London Cooperative Society has a membership of more than a quarter of a million members. Even allowing for the fact that more than one person per family may become a member of the organization, the society supplies at least 1,000,000 of the population of London. Its sales amount to more than $30,000,000 per year, and it has share capital of some $13,000,000. It has bought out several private business enterprises and now it runs more than 300 business enterprises of which 135 are grocery stores, 57 are meat markets, 19 are bakery shops, 9 are green grocery shops, 26 are "drapery" shops, 24 are clothing stores, 25 are shoe stores, 26 are fuel yards, 17 are hardware stores, 10 are furniture stores, 2 are cafés, and 2 are hairdressing establishments. During 1927 some new enterprise was opened, on an average, every 10 days.

It operates a building department which makes loans on long-term mortgages. It also has extensive productive enterprises. In fact, in one place it has a 7-acre industrial settlement in which are a shoe repair works, cabinetmaking works, upholstery shops, etc. It also operates a model farm. Of its 6,500 employees, 2,000 are engaged in production.

Much of its development is in the suburban areas of the city, but "now that the circumference has been secured, the trend of progress will be inward to the center."

## Notes on Cooperative Developments

THE August, 1929, issue of Cooperation (New York) describes the community of Brasstown, N. C. This community has a savings and loan association, organized in 1926, a community chicken hatchery, a farmers' association which operates a corn mill, buys feed and fertilizer, and stores corn, a cooperative handicraft association, and a cooperative creamery.

*Progress of Consumers' Cooperative Services.*—The 1928–29 report of Consumers' Cooperative Services (Inc.), shows a total business for the year of $612,226, net earnings of $32,530, paid-in share capital of $59,483, and a membership of 3,255. The organization operates

four cafeterias and four food shops. The year 1928–29 is the first full year when the entire organization—stores as well as cafeterias—has been operated on the basis of the 48-hour week and a minimum wage of $20.

The organization has accumulated a "reserve fund for the extension of the business as a consumers' cooperative," amounting to $136,330. In looking about for ways in which this money could best be employed, it was decided that housing furnished the most effective field, and the society has been gathering data as to what sort of housing accommodation the members desired and what land could be secured as a site for the "small housing project practicable" for the society.

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*Growth of Northern States Cooperative League.*—The annual report of the secretary of the Northern States Cooperative League [5] states that from 1925 to 1928 the membership of the league has grown from 15,571 to 54,824, while the sales of the affiliated societies increased from $6,762,000 to $10,422,000.

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*Consumers' cooperation in Belgium.*—The 60 consumers' cooperative societies affiliated with the Belgian Cooperative Office have a combined membership of 286,600 families, including about 1,200,000 persons, according to a recent report of that office, noted in the June, 1929, issue of the Revue de Travail (Brussels). These societies have in operation 945 shops scattered through 676 communes, and also conduct 342 so-called "people's houses" (*Maisons du Peuple*). They employ a total of 5,853 workers. The sales for 1928 amounted to 760,000,000 francs ($21,128,000), and the rebates on purchases to 24,459,817 francs ($679,983).

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*Training courses in Russia.*—Two-year courses to train workers for supervisory work in the cooperative movement have been inaugurated in Russia, according to the July 1, 1929, Information Bulletin of Centrosoyus (the Russian Central Cooperative Union). The courses will combine general education with "a broad practical preparation and special vocational training." They will be divided into two departments—those giving training for the commercial (salesmanship) branch, and for bookkeeping. Students with a primary school education will be admitted, thus making it possible "for poor peasants and village workers even of the most backward national republics and territories to gain an entrance into the schools."

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*Regional cooperative conference.*—On June 18, 1929, a conference of cooperative stores in the vicinity of Dorchester, Wis., was held under the auspices of the Northern States Cooperative League. Thirteen stores were represented by 38 delegates. Experiences were exchanged

[5] Reviewed in the August, 1929, issue of the Cooperative Pyramid Builder, Superior, Wis.

and addresses were given by experts in various cooperative lines. Perhaps the most significant step was the suggestion of a federation for the district. A committee of five was elected to further the work of bringing the cooperatives together for mutual effort.

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*Pensions for cooperative employees.*—In 1928 the English Cooperative Wholesale Society inaugurated a pension scheme for its employees, which went into effect July 15. The People's Yearbook for 1929 estimates the annual cost of the scheme to the society at £166,614 ($810,827). The directors of the society regarded this as "the outstanding feature" of the year's operation. Some 200 persons have already been retired under the scheme.

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*Importance of cooperatives in the manufacture of butter.*—According to Agricultural Cooperation (Washington, D. C.), of August 24, 1929, 33 per cent of the creamery butter produced in the United States in 1928 was made in plants owned or operated cooperatively. In Wisconsin the percentage was 75 and in Minnesota, 67. The proportion produced by cooperatives in Vermont was 50 per cent, in California, 44 per cent, in Iowa, 43 per cent, and in Washington and Michigan, 30 per cent.

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*Dividend policy of Nebraska Farmers' Union Exchange.*—In pursuance of the policy authorized at the recent meeting of the Farmers' Union Exchange of Omaha, Nebr., the patronage dividend for the past year of nonmember patrons has been credited on the purchase of shares in the exchange.[6] Heretofore this dividend has been paid in cash. As new shareholders are brought into the organization, the shares held by nonpatrons and absentee owners will be redeemed, so as to insure that shares shall be held only by active members and patrons.

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[6] Cooperation, New York, August, 1929.

# WORKERS' EDUCATION AND TRAINING

## English Training Schemes for the Unemployed

SINCE the British dominions, especially Canada and Australia, have an unsatisfied need for men and boys on the land and for women in domestic service, and since England has hundreds of thousands of unemployed, it seems fairly obvious that some application of the law of supply and demand should be possible whereby the dominions' needs could be met from England's superfluity. The difficulty has been that few of the English unemployed were qualified to take up work on the land and that the dominions have little need for urban workers. To meet the situation, the English Government has for some years past been developing a number of training centers to give suitable candidates a training which would enable them to migrate as agricultural workers. For those who were not fitted for migration, training was provided which would prepare them for work as handy men, or specific training was given for some branch of work in which there seemed openings. The annual report of the Ministry of Labor for 1928, which has recently appeared, gives some account of these centers.

### Training for Overseas Work

THE plan was inaugurated in 1925, with two centers, at Claydon and Brandon. Ostensibly, the course was designed merely to test the man's willingness to work hard and to give him some preliminary training which should make him of use at once upon a farm, but it had a secondary purpose, hardly less important.

It is not easy to persuade a young industrial worker to consider agricultural work, still less to go to the dominions for such work, of which he knows little. But once he agrees to accept the experience of the training centers, in the great majority of cases he discovers a liking for the open-air life and the interest of caring for horses and livestock. In any plans, therefore, for bringing the industrial worker into touch with the agricultural opportunities in the dominions, these training centers play a decisive part, for the man himself as well as for the dominion farmer for whom he will afterwards work.

After some experimentation, the length of the course was fixed at 12 weeks. The training is divided into four sections, the first dealing with clearing land, tree felling, fencing, and rough carpentry, including the erection of wire fencing, gate hanging, and the construction of rough shelters. The second includes dairying; the third, the handling of horses and plowing; and the fourth, general farming.

By April, 1928, the centers were receiving applications for this training in excess of their capacity and two tent training camps were opened with accommodations in each for 200 men at a time. In August steps were taken to establish four additional centers, which, opened in January and February, 1929, can take care of 720 men at a time, and in addition arrangements have been made for training 200 men at a time at the Army vocational center at Chisledon.

A study of the Canadian situation led to the belief that there were openings there for men who had not been specifically trained in farm work but had proved their general suitability for open-air life on the land overseas.

What was contemplated was four or five weeks of hard outdoor work, such as land clearing, tree felling, and fencing. This testing could be done efficiently and economically in tented camps, but in view of the desirability of as large a proportion as possible reaching Canada early in the season it became necessary to provide hutments which could be occupied during the late winter and spring.

Five such centers, with room for 1,200 men, were established on or near land belonging to the Forestry Commission, which had to be cleared for reforestation and which consequently gave abundant opportunity for employing the men in timber cutting, grubbing roots, clearing scrub, fencing, road making, and the like. Training in farm work, milking, and the like is not possible in the time available, but the men are trained in handling horses and in the use of Canadian harness and wagons.

Up to the end of December, 1928, 3,201 men had completed overseas training in these centers, and of these 3,154 had migrated. A representative of the Labor Ministry, visiting Australia in the latter part of 1927, found that there was much evidence of the value of the training, both to the trainee and the Australian farmer. From Canada official reports have been received concerning 450 of the 999 trainees who went there in 1928.

The reports indicated that 78 per cent of the men were making good on the land and that 22 per cent had either left the farms on which they had been placed or that their success was doubtful. * * * The proportion of the trainees who are making good on the land is, in fact, probably somewhat higher than the 78 per cent given above, since some of the trainees who fail to make good with the first farmer with whom they are placed and who gives an adverse report upon them to the field supervisor are known, from letters which they themselves have written home, to have established themselves successfully on other farms. * * * Only about 20 of the 3,154 who have gone overseas after training have returned home.

### Training for Work in England

Up to the end of December, 1928, 9,558 men had been admitted to the centers for home training, of whom 1,689 were still in training, 1,122 had withdrawn or been dismissed before completing the course, and 6,747 had completed training or been placed in employment before completing it.

During 1928 accommodations for training of this kind were much increased, with a view to helping in the transfer of unemployed miners from the depressed areas. It was found that the young miners responded readily to training along industrial lines, and with the increased facilities the character of the instruction was widened and related more nearly to the industrial demand.

Courses are now given in such occupations as oxy-acetylene welding, electric welding, sheet-metal working, coach trimming, precision filing and fitting, and hairdressing, in all of which there is a definite and unsatisfied demand for men of the improver type.

The report comments on the excellent character of the men who apply for this training. They are, for the most part, "readily adaptable and eager to assimilate the instruction given," and, upon the completion of training, they are easily placed. During the

year covered, 2,973 men were placed in employment through the training centers.

Arrangements were in hand for largely increasing the existing facilities and it was expected that the rate of output might be at least doubled before the end of 1929. Even then the number would not be large in relation to the total absorptive power of industry, but would be a substantial contribution toward meeting the needs of young men who through no fault of their own find themselves without the opportunities and equipment for obtaining a decent livelihood.

### Home-Training Centers for Unemployed Women

IN THESE centers a 3-months course is given unemployed women and girls in cookery, laundry work, housewifery, and needlework, in order to enable them to take up domestic service.

While it is not claimed that a complete training in all domestic subjects can be given in this short course, it has been found possible to give a sufficient grounding to enable the trainees to take posts in households where some supervision can be given at first, and experience has proved that they quickly develop into capable domestic workers.

During the year special attention was given to training women in the distressed mining areas. The Government made a special grant of £10,000 ($48,665), subsequently increased to £15,000 ($72,998), for new centers in these areas, and 20 were opened, 10 in the northern coal fields, 9 in South Wales, and 1 in Lancashire. Here unemployed girls and young women from 16 years of age upward may receive a course in housewifery, and on its completion outfits are provided and fares are paid to employment found in other districts. The necessity for placing them at a distance involves a serious risk of homesickness, but, on the whole, "the number who have returned to their homes has been very small."

The total number of women and girls who completed training between January and December, 1928, was 3,506, and the number in training at the end of the year was 810. The number of towns in which centers have been in operation for some period during the year is 42. The number of courses held is 95. * * *

The residential training center at Market Harborough for young women who desire to qualify for a free passage to Australia as household workers, * * * has had a successful year, and satisfactory reports on the women who received their training there have been received from Australia. Since the center was opened in September, 1927, 268 trainees have completed training and all of these have sailed for Australia.

# INDUSTRIAL DISPUTES

## Strikes and Lockouts in the United States in August, 1929

DATA regarding industrial disputes in the United States for August, 1929, with comparable data for preceding months, are presented below. Disputes involving fewer than six workers and lasting less than one day have been omitted.

Table 1 is a summary table showing for each of the months—January, 1927, to August, 1929, inclusive—the number of disputes which began in those months, the number in effect at the end of each month, and the number of workers involved. It also shows, in the last column, the economic loss (in man-days) involved. The number of workdays lost is computed by multiplying the number of workers affected in each dispute by the length of the dispute measured in working-days as normally worked by the industry or trade in question.

TABLE 1.—INDUSTRIAL DISPUTES BEGINNING IN AND IN EFFECT AT END OF EACH MONTH, JANUARY, 1927, TO AUGUST, 1929

| Month and year | Number of disputes— | | Number of workers involved in disputes— | | Number of man-days lost during month |
|---|---|---|---|---|---|
| | Beginning in month | In effect at end of month | Beginning in month | In effect at end of month | |
| **1927** | | | | | |
| January | 37 | 18 | 5,915 | 2,287 | 58.125 |
| February | 65 | 45 | 9,756 | 5,717 | 115.229 |
| March | 74 | 67 | 13,142 | 8,182 | 214.283 |
| April | 87 | 88 | 202,406 | 199,701 | 5,265.420 |
| May | 107 | 116 | 22,245 | 200,702 | 5,136.006 |
| June | 80 | 88 | 18,957 | 196,323 | 4,863.345 |
| July | 65 | 63 | 33,994 | 199,287 | 5,308.123 |
| August | 57 | 53 | 8,150 | 198,444 | 4,999.751 |
| September | 57 | 58 | 12,282 | 196,829 | 4,945.702 |
| October | 50 | 58 | 13,024 | 82,095 | 2,724.117 |
| November | 27 | 51 | 5,282 | 82,607 | 2,040.140 |
| December | 28 | 54 | 4,281 | 81,229 | 2,129.153 |
| **1928** | | | | | |
| January | 48 | 63 | 18,850 | 81,880 | 2,128.028 |
| February | 52 | 58 | 33,441 | 103,496 | 2,145.342 |
| March | 41 | 47 | 7,459 | 76,069 | 2,291.337 |
| April | 71 | 48 | 143,700 | 129,708 | 4,806.232 |
| May | 80 | 56 | 15,640 | 133,546 | 3,455.499 |
| June | 44 | 46 | 31,381 | 143,137 | 3,670.878 |
| July | 54 | 42 | 18,012 | 132,187 | 3,337.386 |
| August | 59 | 42 | 8,887 | 105,760 | 3,553.750 |
| September | 52 | 34 | 8,897 | 62,862 | 2,571.982 |
| October | 61 | 42 | 27,866 | 41,474 | 1,304.913 |
| November | 44 | 38 | 37,840 | 38,745 | 1,300.362 |
| December | 23 | 29 | 5,172 | 35,842 | 991.238 |
| **1929** | | | | | |
| January | 45 | 34 | 14,727 | 39,484 | 949.692 |
| February | 48 | 34 | 20,134 | 40,385 | 921.583 |
| March | 77 | 42 | 14,052 | 41,321 | 1,094.161 |
| April | 103 | 52 | 30,130 | 52,292 | 1,429.046 |
| May | 98 | 73 | 26,220 | 58,959 | 1,578.929 |
| June | 69 | 71 | 19,702 | 54,584 | 1,526.627 |
| July [1] | 77 | 80 | 36,378 | 22,008 | 1,150.887 |
| August [1] | 53 | 81 | 23,881 | 15,189 | 524.099 |

[1] Preliminary figures subject to change.

## Occurrence of Industrial Disputes, by Industries

TABLE 2 GIVES by industry the number of strikes beginning in June, July, and August, 1929, and the number of workers directly involved.

TABLE 2.—INDUSTRIAL DISPUTES BEGINNING IN JUNE, JULY, AND AUGUST, 1929

| Industry | Number of disputes beginning in— | | | Number of workers involved in disputes beginning in— | | |
|---|---|---|---|---|---|---|
| | June | July | August | June | July | August |
| Auto, carriage, and wagon workers | 1 | 5 | 1 | 75 | 1,409 | 600 |
| Bakers | | 2 | | | 105 | |
| Broom and brush workers | | 1 | | | 300 | |
| Building trades | 25 | 16 | 9 | 5,962 | 2,294 | 1,683 |
| Car builders | | | 1 | | | 1,500 |
| Chauffeurs and teamsters | 3 | 9 | 4 | 67 | 1,036 | 604 |
| Clothing | 11 | 16 | 11 | 5,927 | 18,690 | 2,520 |
| Electric and gas supply workers | | | 1 | | | 300 |
| Food workers | | | 1 | | | 79 |
| Furniture | | 2 | 2 | | 74 | 48 |
| Hotel and restaurant workers | 1 | | | 62 | | |
| Leather | 1 | 2 | 2 | 25 | 1,040 | 111 |
| Longshoremen and freight handlers | | 1 | 1 | | 100 | 225 |
| Metal trades | 6 | 3 | 1 | 482 | 71 | 120 |
| Miners | 7 | 2 | 8 | 5,795 | 7,050 | 15,375 |
| Motion-picture operators, actors, and theatrical workers | 3 | 1 | 1 | 48 | 80 | 21 |
| Printing and publishing | | 1 | | | 1,000 | |
| Railway workers | 2 | | | 321 | | |
| Stationary engineers and firemen | | 1 | 2 | | 75 | 130 |
| Street railway workers | 1 | 1 | | 228 | 1,500 | |
| Municipal employees | | 1 | | | 21 | |
| Textiles | 7 | 11 | 3 | 360 | 1,193 | 286 |
| Tobacco | 1 | | | 350 | | |
| Other occupations | | 2 | 5 | | 340 | 279 |
| Total | 69 | 77 | 53 | 19,702 | 36,378 | 23,881 |

## Size and Duration of Industrial Disputes, by Industries

TABLE 3 GIVES the number of industrial disputes beginning in August, 1929, classified by number of workers and by industries.

TABLE 3.—NUMBER OF INDUSTRIAL DISPUTES BEGINNING IN AUGUST, 1929, CLASSIFIED BY NUMBER OF WORKERS AND BY INDUSTRIES

| Industry | Number of disputes beginning in August, 1929, involving— | | | | | |
|---|---|---|---|---|---|---|
| | 6 and under 20 workers | 20 and under 100 workers | 100 and under 500 workers | 500 and under 1,000 workers | 1,000 and under 5,000 workers | Over 5,000 workers |
| Auto, carriage, and wagon workers | | | | 1 | | |
| Building trades | 2 | 2 | 4 | 1 | | |
| Car builders | | | | | 1 | |
| Chauffeurs and teamsters | 1 | 1 | 2 | | | |
| Clothing | 2 | 7 | 1 | | 1 | |
| Electric and gas supply workers | | | 1 | | | |
| Food workers | | 1 | | | | |
| Furniture | 1 | 1 | | | | |
| Leather | 1 | | 1 | | | |
| Longshoremen and freight handlers | | | 1 | | | |
| Metal trades | | | 1 | | | |
| Miners | | | 3 | | 4 | 1 |
| Motion-picture operators, actors, and theatrical workers | | 1 | | | | |
| Stationary engineers and firemen | 1 | | 1 | | | |
| Textiles | 1 | | 2 | | | |
| Other occupations | 1 | 3 | 1 | | | |
| Total | 10 | 16 | 18 | 2 | 6 | 1 |

In Table 4 are shown the number of industrial disputes ending in August, 1929, by industries and classified duration.

TABLE 4.—NUMBER OF INDUSTRIAL DISPUTES ENDING IN AUGUST, 1929, BY INDUSTRIES AND BY CLASSIFIED DURATION

| Industry | Classified duration of strikes ending in August | | | | |
|---|---|---|---|---|---|
| | One-half month or less | Over one-half and less than 1 month | 1 month and less than 2 months | 2 months and less than 3 months | 3 months and less than 4 months |
| Auto, carriage, and wagon workers | 1 | | | | |
| Building trades | 6 | 4 | 1 | 3 | 1 |
| Car builders | 1 | | | | |
| Chauffeurs and teamsters | 4 | | | | |
| Clothing | 3 | 4 | 1 | 1 | |
| Electric and gas supply workers | 1 | | | | |
| Food workers | 1 | | | | |
| Leather | 1 | | | | |
| Longshoremen and freight handlers | 1 | | | | |
| Metal trades | | | | | 1 |
| Miners | 5 | | | | |
| Motion-picture operators, actors, and theatrical employees | 1 | | | 1 | |
| Printing and publishing | | | 1 | | |
| Stationary engineers and firemen | 1 | | | | |
| Textiles | | | 1 | | 3 |
| Tobacco | | | 1 | | |
| Other occupations | 2 | 1 | | | |
| Total | 28 | 9 | 5 | 5 | 5 |

## Principal Strikes and Lockouts Beginning in August, 1929

*Anthracite coal miners, Pennsylvania.*—The Marvin Colliery of the Hudson Coal Co. was affected by a strike of 1,300 employees from August 1 to August 3 because the company would not allow the committee time off to handle a grievance. The strikers voted to return to work and place their case in the hands of the district officers of the union.

*Car builders, Pennsylvania.*—Demanding an increase in wages and shorter hours, 1,000 car erectors and builders were on strike from August 1 to August 5 against the Pressed Steel Car Co., at McKees Rocks. Half of the increase demanded was granted and the hours were reduced from 9½ to 9 a day.

*Building-trades workers, Pennsylvania.*—A strike of 800 workers, involving various building-trades unions, against Stone & Webster, contractors, on the construction of a new breaker for the Philadelphia & Reading Coal & Iron Co., at Locust Summit, began August 8 and ended August 12. The men refused to work 9 hours a day. It was agreed to refer the question to the conciliation board for decision.

*Anthracite coal miners, Pennsylvania.*—A strike of 1,800 miners was called against the Glen Alden Coal Co., at Nanticoke, which lasted from August 14 to August 17, because the management delayed in calling a conference on wage rates. The men agreed to resume work and place their case in the hands of their officers, whom the company agrees to meet.

*Automobile workers, Georgia.*—A brief strike of 600 automobile-body workers is reported to have occurred in Atlanta against the Fisher Body Co., beginning August 16 and ending the following day,

because of unsatisfactory working conditions involving irregular hours and piecework pay with layoffs during the day. The company manager gave assurance, it is said, that the grievances would be discussed with a committee of employees.

*Anthracite coal miners, Pennsylvania.*—Approximately 1,450 miners employed by the Susquehanna Coal Co., at Glen Lyon, were on strike from August 19 to August 21. They claimed that the superintendent would not meet with a committee to adjust grievances. This the superintendent agreed to do.

*Shoe workers, Massachusetts.*—Some 2,000 shoe workers in Salem, Lynn, and Beverly struck on August 28 to enforce demands for revision of wages, improved working conditions, and recognition of the union—the United Shoe Workers Union of America. This strike is still in progress.

*Anthracite coal miners, Pennsylvania.*—The Lehigh & Wilkes-Barre Coal Co., of Wilkes-Barre, was affected by a strike of 9,000 employees from August 29 to September 3, on account of objection to the kind of powder used. The company agreed that this should be tested.

### Principal Strikes and Lockouts Continuing into August, 1929

*Gravediggers, New York.*—The strike which began July 30 against the Calvary Cemetery Corporation seems to have been lost through the return of some of the workers and the filling of the places of others by the corporation. Two groups of gravediggers who appeared on August 23 at the office of the cemetery on Greenpoint Avenue, Blissville, were turned away, it is said, by officials of the cemetery with the statement that all places had been filled and the cemetery had reemployed all the former workmen whom it wished to take back.

*Street-car workers, Louisiana.*—The strike which began July 2 against the New Orleans Public Service (Inc.) is still unsettled. Press reports show that as a result of conferences in New York City between President Green, of the American Federation of Labor, and representatives of both sides, and Father John O'Grady, of Washington, D. C., a tentative agreement was reached on September 5, subject to ratification by the strikers. Father O'Grady is credited with taking the initiative in bringing about the friendly conferences referred to.

The carmen, however, voted on September 11 to reject the proposed agreement because, it is said, the company officials refused to state when the strikers would be taken back.

*Shoe workers, Massachusetts.*—The strike in Boston and Chelsea which began April 8 is still in progress.

*Textile workers, North Carolina.*—The strike which began July 11 against the Marion Manufacturing Co. at Marion was called off Tuesday night, September 10, according to press reports. Inviting former employees to return to work, the company on September 9 announced that an attempt to resume operations would be made on the following day. The plant started up, accordingly, with more than 100 workers. The mill will operate, it is said, on a 55-hour-week schedule with the pay per hour and per piece as formerly, but at the end of six weeks the mill management may submit to its employees the question of whether they wish to remain on a schedule of 55 hours or go back to the 60-hour schedule on the present basis of pay.

## Conciliation Work of the Department of Labor in August, 1929

By Hugh L. Kerwin, Director of Conciliation

THE Secretary of Labor, through the Conciliation Service, exercised his good offices in connection with 61 labor disputes during August, 1929. These disputes affected a known total of 41,986 employees. The table following shows the name and location of the establishment or industry in which the dispute occurred, the nature of the dispute (whether strike or lockout or controversy not having reached the strike or lockout stage), the craft or trade concerned, the cause of the dispute, its present status, the terms of settlement, the date of beginning and ending, and the number of workers directly and indirectly involved.

On September 1, 1929, there were 65 strikes before the department for settlement and in addition 20 controversies which had not reached the strike stage. The total number of cases pending was 85.

## LABOR DISPUTES REPORTED DURING THE MONTH OF AUGUST, 1929

| Company or industry and location | Nature of controversy | Craftsmen concerned | Cause of dispute | Present status and terms of settlement | Duration | | Workers involved | |
|---|---|---|---|---|---|---|---|---|
| | | | | | Beginning | Ending | Directly | Indirectly |
| | | | | | 1929 | 1929 | | |
| Truck drivers, Philadelphia, Pa. | Strike | Drivers | Wages and working conditions. | Adjusted. Agreement signed yielding some increases. | July 29 | July 30 | 800 | |
| United Engineers Construction Co., Philadelphia, Pa. | do | Building trades | Proposed wage cut; nonunion conditions. | Adjusted. No wage cut; union conditions. | Aug. 1 | Aug. 6 | 1,500 | |
| Invincible Cloak Co., Glen Cove, L. I. | do | Garment workers | Wages and working conditions. | Adjusted. Allowed union wages and conditions. | do | Aug. 5 | 100 | |
| Fidelity Knitting Mills, Philadelphia, Pa. | do | Hosiery workers | Proposed wage cut—10 to 20 per cent. | Adjusted. Company withdrew demands. | July 19 | Aug. 1 | 275 | |
| Truck drivers, Schenectady, N. Y. | do | Drivers | Demand for wage increase and union recognition. | Pending | July 10 | | 125 | 2,000 |
| Pressed Steel Car Co., McKees Rocks, Pa. | do | All employees | Wages and hours | Adjusted. Granted 9-hour day and wage increase. | Aug. 1 | Aug. 9 | 1,500 | 3,000 |
| Aronimink Country Club, near Philadelphia, Pa. | do | Caddies | Wages | Adjusted before commissioner's arrival. | July 22 | | 60 | |
| Philharmonic Orchestra, Hollywood, Calif. | do | Musicians | Employment of nonunion electrician. | Adjusted before commissioner's arrival. Employed union electrician. | July 30 | Aug. 4 | 100 | 40 |
| Spring Brook Water Co., Scranton, Pa. | do | Gas workers | Wages and hours | Adjusted before commissioner's arrival. Hours reduced; agreement signed. | Aug. 6 | Aug. 9 | 300 | |
| American-Hawaiian Line, Boston, Mass. | do | Longshoremen | Objection to hide carriers instead of trucks. | Adjusted before commissioner's arrival. Hide carts discontinued. | Aug. 5 | Aug. 17 | 200 | |
| Armory Building, Norwood, Mass. | Controversy | Ironworkers | Wages | Unclassified. Referred to State board for adjustment. | Aug. 1 | Aug. 2 | (1) | |
| Brand Co., Cleveland, Ohio | Lockout | Teamsters | Union recognition | Pending. No prospect of settlement | July 15 | | 22 | |
| Sheet-metal workers, Evansville, Ind. | Strike | Sheet-metal workers. | Working conditions | Adjusted. Satisfactory adjustment of conditions. | July 30 | Aug. 6 | 25 | |
| Building Trades, Evansville, Ind. | do | Building trades | Nonunion plumbers | Pending. Little prospect of adjustment. | July 8 | | 10 | 14 |
| Jacob Siegel Co., Philadelphia, Pa. | do | Overcoat makers | Recognition of union and wages. | Adjusted. Union agreement signed granting 5 per cent increase. | Aug. 2 | Aug. 29 | 150 | |
| Lob-Hubbard (Inc.), Philadelphia, Pa. | do | Clothing workers | do | Pending | July 22 | | 65 | 55 |
| H. Darhoff & Sons, Philadelphia, Pa. | do | do | do | Adjusted. Union agreement signed granting 5 per cent increase. | July 31 | Aug. 30 | 150 | |
| Gillman & Sarota, Philadelphia, Pa. | do | Carpenters | Wage cut—$1.25 to $1 an an hour. | Adjusted. Wages continued at $1.25 an hour. | Aug 5 | Aug. 7 | 51 | |
| Calvary Cemetery Corporation, Long Island City, N. Y. | do | Gravediggers | Asked $2 a day increase | Adjusted. Investigation to be made | Aug. 1 | Aug. 14 | 300 | |
| Knee-pants makers, New York City | do | Clothing workers | Wage cuts in violation of agreement. | Adjusted. Back pay allowed where cuts were made. | July 24 | Aug. 1 | 1,100 | 2,000 |
| Taxi drivers, Bronx, N. Y. | do | Drivers | Asked 5 per cent increase | Pending | Aug. 6 | | 250 | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Taxi drivers, Bronx, N. Y. | do | Drivers | Asked 5 per cent increase | Pending | Aug. 6 | | 250 | |
| Produce truck drivers, Newark, N. J. | do | do | Asked $40 per week, and $1 an hour overtime. | Adjusted. Allowed $40 a week and $1 overtime some trucks. | July 7 | July 8 | 300 | 40 |
| Regensteiner Corp., Chicago, Ill | do | Pressmen | Asked union wages and conditions. | Adjusted. Union conditions granted Sept. 1, 1929. | July 26 | Aug. 16 | 70 | |
| American Colortype Co., Chicago, Ill. | do | do | do | Adjusted | July 18 | Aug. 10 | 270 | |
| Scranton Dry Goods Co., Scranton, Pa. | do | Drivers | Asked 2 weeks' vacation and overtime pay. | Adjusted. Compromised in conference. | Aug. 6 | Aug. 8 | 9 | |
| Standard Sanitary Manufacturing Co., New Brighton, Pa. | do | Enamelers | Asked increase in wages | Pending | Aug. 8 | | 120 | 580 |
| Bread Bakery, Fort Wayne, Ind | Controversy | Bakers | Asked union agreement | do | Aug. 1 | | 8 | 70 |
| Coal breaker, Locust Summit, Pa | Strike | Building trades | Asked rates paid members United Mine Workers. | Adjusted. Referred to conciliation board for decision. | Aug. 8 | Aug. 12 | 800 | 200 |
| Hudson Coal Co., North Scranton, Pa. | do | Anthracite miners | Working conditions | Adjusted. District officers to fix terms | Aug. 1 | Aug. 3 | 1,300 | 13 |
| Feldman & Son, Philadelphia, Pa | do | Clothing workers | Asked union recognition and wage increase. | Adjusted. Union agreement and 5 per cent increase in pay. | do | Aug. 30 | 150 | |
| Floyd-Wells Co., Royersford, Pa | Controversy | Molders | Men discharged for union activities. | Pending | Aug. 11 | | 39 | 10 |
| Keystone Silk Hosiery Co., Brooklyn, N. Y. | Strike | Hosiery knitters | Asked union recognition | do | July 19 | | 6 | 39 |
| Bear & Meyer, Fort Wayne, Ind | Controversy | Carpenters | Employment of nonunion carpenters. | Adjusted. Union carpenters employed | Aug. 1 | Aug. 12 | 15 | |
| Thorgensen & Erickson, Huntington, Ind. | do | do | do | Pending | Aug. 12 | | 15 | 275 |
| Glen Alden Co., Nanticoke, Pa | Strike | Anthracite miners | Wage rates | Adjusted. District officers to fix terms | Aug. 14 | Aug. 17 | 1,800 | 20 |
| White Printing House, Chicago, Ill. | do | Pressmen | Asked union scale | Unable to adjust | Aug. 5 | | 24 | |
| Stearns Bros., Chicago, Ill | do | do | Asked union scale and 44-hour week. | Adjusted. Demands granted | do | Aug. 14 | 19 | |
| Surpass Leather Co., Philadelphia, Pa. | do | Leather workers | Asked union recognition and 25 per cent increase. | Adjusted. Returned without change | Aug. 14 | Aug. 30 | 100 | 225 |
| Susquehanna Coal Co., Glen Lyon, Pa. | do | Anthracite miners | Refusal to meet committee of miners. | Adjusted. Agreed to meet committee | Aug. 18 | Aug. 21 | 1,400 | 50 |
| National Garment Co., Batavia, Ill. | Controversy | Clothing workers | Alleged violation of agreement. | Pending | | | 25 | |
| Carpenters, Evanston, Ill | Strike | Carpenters | Trouble with superintendent | Adjusted. Superintendent discharged | Aug. 12 | Aug. 24 | 24 | 56 |
| Hubschman's Tannery, Philadelphia, Pa. | do | Tannery workers | Discharge of 1 man | Adjusted. Discharged man reinstated | Aug. 19 | Aug. 22 | 11 | |
| Lipson Co., Boston, Mass | do | Leather coat makers. | Asked union recognition | Unable to adjust | Aug. 6 | | 8 | |
| Feldman Co., Boston, Mass | do | do | do | do | do | | 12 | 20 |
| M. Kondagran & Son, Watertown, Mass. | do | Clothing workers | do | do | June 1 | | 150 | |
| Limousine Body Corporation, Kalamazoo, Mich. | do | Auto body workers | Working conditions and supervision. | Adjusted. Superintendent discharged | Aug. 1 | Aug. 20 | 240 | 135 |
| Poultry Producers Association of Southern California. | Controversy | Egg inspectors | Renewal of agreement | Pending | July 23 | | 20 | 25 |
| Lehigh & Wilkes-Barre Coal Co., Plymouth, Pa. | Strike | Anthracite miners | Objection to new powder | Adjusted. District officers to settle matter. | Aug. 23 | Aug. 26 | 1,075 | 25 |

[1] Not reported.

LABOR DISPUTES REPORTED DURING THE MONTH OF AUGUST, 1929—Continued

| Company or industry and location | Nature of controversy | Craftsmen concerned | Cause of dispute | Present status and terms of settlement | Duration | | Workers involved | |
|---|---|---|---|---|---|---|---|---|
| | | | | | Beginning | Ending | Directly | Indirectly |
| Hudson Coal Co., Parsons, Pa. | Strike | Anthracite miners | Working conditions | Adjusted. Conditions adjusted | Aug. 23 | Aug. 26 | 300 | 10 |
| Columbia Broadcasting Co., New York City. | do | Carpenters | Nonunion labor and pay for overtime. | Adjusted. Nonunion labor discharged; overtime settled. | do | Aug. 23 | 16 | 7 |
| Bloomsburg Silk Mills, Bloomsburg, Pa. | do | Silk weavers | Change in piecework rate | Adjusted. Piecework rates modified | Aug. 26 | Aug. 30 | 150 | |
| Perth Amboy Hat Co. and Seiden Hat Co., Perth Amboy, N. J. | do | Hatters | Asked union recognition | Pending | | | 45 | 37 |
| Hemstitchers, pleaters, tuckers, New York City. | do | Needleworkers | Asked 40-hour week and wage increase. | Adjusted. 40-hour week granted with some increases. | Aug. 30 | Sept. 6 | 4,000 | |
| Neckwear Workers, New York City | Controversy | Neckwear workers | Proposed wage cut of 15 per cent. | Pending | July 1 | | 3,000 | |
| Roberti Furniture Co., Los Angeles, Calif. | Lockout | Upholsterers | Reduction in wages | do | Aug. 19 | | 42 | 20 |
| Consolidated Sheet Co., Wilmington, Calif. | Controversy | Boiler makers | Asked 44-hour week | do | Aug. 24 | | 15 | 60 |
| Saranoff Hat Co., Perth Amboy, N. J. | Strike | Hatters | Asked union recognition | do | Aug. 28 | | 90 | 64 |
| Jackson Shoe Co., New York City | do | Shoe workers | Asked union recognition, 44-hour week, and increase. | Adjusted. Allowed 10 per cent increase in wages. | July 17 | Aug. 20 | 75 | |
| Byrnes Shoe Co., Brooklyn, N. Y | do | do | Asked union recognition | Adjusted. Other workers employed | July 27 | Aug. 24 | 50 | 25 |
| Black Hawk Central Garage, Rockford, Ill. | do | Machinists | Asked union agreement | Pending | Aug. 23 | | 6 | |
| Lehigh & Wilkes-Barre Coal Co., Wilkes-Barre, Pa. | do | Anthracite miners | Use of new powder | Adjusted. Powders to be tested | Aug. 29 | Sept. 3 | 9,000 | |
| Total | | | | | | | 32,871 | 9,115 |

## Strikes in Greater Shanghai, 1928

IN 1928, in Greater Shanghai, 120 strikes occurred which involved 213,966 workers and affected over 5,400 establishments. A report on these industrial conflicts has been compiled by the Bureau of Social Affairs under the city government of the above-mentioned municipality.[1] The following data are taken from this publication.

The strikes are classified under two groups: (1) Those concerned with collective bargaining, including strikes relative to collective wage agreements and conditions of employment; and (2) strikes not concerned with collective bargaining, such as sympathetic or political strikes.

In 1928 there were 101 strikes (or 84.17 per cent of the total) which fell under the first classification. Of these strikes, 17 related to the collective agreements, 27 to wages, and 24 to the engagement or the dismissal of workers. Of the 19 strikes under the second principal classification, 7 were sympathetic and 6 political.

The results of the 117 strikes settled in 1928 were as follows: Demands entirely accepted in 45 cases, partially accepted in 39 cases, rejected in 12 cases, and indeterminate or unknown in 21 cases.

The strikes are classified, respectively, in the following table by industrial groups, by nationality of management, by number of workers involved, and by number of man-days lost:

CLASSIFICATION OF STRIKES BY INDUSTRY GROUP, NATIONALITY OF MANAGEMENT, WORKERS INVOLVED, AND TIME LOST

| Item | Number of strikes | Per cent of strikes | Item | Number of strikes | Per cent of strikes |
|---|---|---|---|---|---|
| Industry group: | | | Number of workers involved: | | |
| Public utility | 4 | 3.33 | Less than 10 | 3 | 2.50 |
| Communications | 13 | 10.84 | 10 to 100 | 31 | 25.83 |
| Textile | 36 | 20.00 | 101 to 1,000 | 63 | 52.50 |
| Food products | 22 | 18.33 | 1,001 to 10,000 | 21 | 17.50 |
| Business | 10 | 8.33 | Over 10,000 | 2 | 1.66 |
| Construction | 2 | 1.67 | | | |
| Machinery | 6 | 5.00 | Total | 120 | 100.00 |
| Printing | 6 | 5.00 | | | |
| Necessaries | 21 | 17.50 | Number of man-days lost: | | |
| | | | Less than 20 | 5 | 4.27 |
| Total | 120 | 100.00 | 20 to 1,000 | 60 | 51.28 |
| | | | 1,001 to 50,000 | 48 | 41.02 |
| Nationality of management: | | | 50,001 to 1,000,000 | 2 | 1.71 |
| Chinese | 96 | 80.00 | Over 1,000,000 | 2 | 1.71 |
| British | 8 | 6.67 | | | |
| Japanese | 7 | 5.83 | Total | [1] 117 | 100.00 |
| British and American | 3 | 2.50 | | | |
| German | 2 | 1.67 | | | |
| American | 2 | 1.67 | | | |
| French | 1 | .83 | | | |
| Russian | 1 | .83 | | | |
| Total | 120 | 100.00 | | | |

[1] 3 of the 120 strikes were unsettled at close of year.

In the above 117 strikes the total number of man-days lost was 3,010,926 and the total wage loss, in Mexican dollars, was 1,592,593 (United States currency, $740,556).

[1] China (Greater Shanghai). Bureau of Social Affairs. Annual report on labor strikes in Greater Shanghai, 1928.

# LABOR ORGANIZATIONS

## Labor Movement in Japan

IN JAPAN at the close of 1928 there were 4,824,780 workers engaged in factories, mines, transportation and communication, and casual employments. This was an increase of 60,952 over the number reported for June 30, 1928. The industrial distribution of these workers is shown in the following table, reproduced from Industrial and Labor Information (Geneva) of July 8, 1929:

CLASSIFICATION OF WORKERS IN JAPAN AT CLOSE OF 1928

| Type of employment | Number of workers | | |
|---|---|---|---|
| | Male | Female | Total |
| Factories: | | | |
| State | 100,597 | 29,585 | 130,182 |
| Municipal | 7,269 | 1,715 | 8,984 |
| Private | 1,084,991 | 1,000,388 | 2,085,379 |
| Total | 1,192,857 | 1,031,688 | 2,224,545 |
| Mines | 233,818 | 61,783 | 295,601 |
| Transportation and communication | 424,111 | 33,445 | 457,556 |
| Casual and other | 1,440,382 | 406,696 | 1,847,078 |
| Grand total | 3,291,168 | 1,533,612 | 4,824,780 |

Figures on membership in trade-unions in Japan, taken from the above-mentioned source, show that in 1923 there were 432 unions, with a membership of 125,551; in 1928 the number of unions was 501 and the membership 308,900.

The above figures indicate that slightly over 6 per cent of the workers are members of trade-unions. According to a communication to the International Labor Office, woman workers constituted only 4 per cent of the trade-union membership at the close of 1928.

# LABOR TURNOVER

## Labor Turnover in American Factories

BEGINNING with July the Bureau of Labor Statistics began presenting labor-turnover rates on both an equivalent annual basis and on a monthly basis. Before that date the figures were shown only on an equivalent annual basis.

The bureau also added last month a column showing its interpretation of the net turnover rate. The definition of this rate is again stated.

All of the rates relating to separation and accession are elements of the broad subject of labor turnover and each classification tells its own story. Yet no one of these classifications is, per se, the turnover rate. The definition of the turnover rate as understood by the Bureau of Labor Statistics is "the rate of replacement."

It is self-evident that a growing plant has an accession rate higher than the separation rate, or it would not be growing. A declining plant has a separation rate greater than the accession rate. The turnover rate, therefore, is the same as the accession rate in a declining force and the same as the separation rate in a plant having an increasing force. The net turnover rate is designated as such at the end of the tables.

AVERAGE LABOR TURNOVER RATES IN SELECTED AMERICAN FACTORIES [1]

[Each month's rates are here stated on an equivalent annual basis. The rates are per 100 employees on the pay roll]

| Month | Separation rates | | | | | | | | Accession rate | | Net turnover rate | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Quit | | Lay-off | | Discharge | | Total [2] | | | | | |
| | 1928 | 1929 | 1928 | 1929 | 1928 | 1929 | 1928 | 1929 | 1928 | 1929 | 1928 | 1929 |
| January | 15.7 | 26.7 | 8.5 | 4.2 | 3.6 | 5.3 | 27.8 | 36.2 | 33.4 | 58.6 | 27.8 | 36.2 |
| February | 15.1 | 31.0 | 7.9 | 4.7 | 4.6 | 6.0 | 27.6 | 41.7 | 31.6 | 56.9 | 27.6 | 41.7 |
| March | 20.1 | 36.8 | 8.4 | 5.7 | 4.3 | 6.7 | 32.8 | 49.2 | 35.9 | 61.2 | 32.8 | 49.2 |
| April | 26.0 | 43.3 | 7.1 | 5.5 | 5.1 | 6.9 | 38.2 | 55.7 | 40.0 | 70.2 | 38.2 | 55.7 |
| May | 28.2 | 40.8 | 8.3 | 5.7 | 5.0 | 5.6 | 41.5 | 52.1 | 47.2 | 59.9 | 41.5 | 52.1 |
| June | 27.1 | 39.5 | 7.5 | 5.4 | 4.9 | 6.2 | 39.5 | 51.1 | 41.3 | 60.9 | 39.5 | 51.1 |
| July | 27.2 | 35.7 | 5.9 | 5.0 | 4.9 | 5.8 | 38.0 | 46.5 | 46.9 | 61.4 | 38.0 | 46.5 |
| August | 31.9 | [3] 34.9 | 5.1 | [3] 5.5 | 5.3 | [3] 5.0 | 42.3 | [3] 45.4 | 55.7 | [3] 50.4 | 42.3 | [3] 45.4 |
| September | 40.3 | ------- | 5.0 | ------- | 5.3 | ------- | 50.6 | ------- | 56.9 | ------- | 50.6 | ------- |
| October | 31.9 | ------- | 4.7 | ------- | 5.3 | ------- | 41.9 | ------- | 57.1 | ------- | 41.9 | ------- |
| November | 25.6 | ------- | 4.8 | ------- | 4.9 | ------- | 35.3 | ------- | 50.1 | ------- | 35.3 | ------- |
| December | 20.1 | ------- | 4.7 | ------- | 4.4 | ------- | 29.2 | ------- | 38.1 | ------- | 29.2 | ------- |
| Average | 25.8 | ------- | 6.5 | ------- | 4.8 | ------- | 37.1 | ------- | 44.5 | ------- | 37.1 | ------- |

[1] Now numbering over 300 with over 600,000 employees. The form of average used is the unweighted median of company rates.
[2] Arithmetic sum of quit, lay-off, and discharge rates.
[3] Preliminary; subject to revision.

AVERAGE LABOR TURNOVER RATES IN SELECTED AMERICAN FACTORIES—Con.

[Monthly rates per 100 employees on the pay roll]

| Month | Separation rates | | | | | | | | Accession rate | | Net turnover rate | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Quit | | Lay-off | | Discharge | | Total | | | | | |
| | 1928 | 1929 | 1928 | 1929 | 1928 | 1929 | 1928 | 1929 | 1928 | 1929 | 1928 | 1929 |
| January | 1.3 | 2.3 | 0.7 | 0.4 | 0.3 | 0.4 | 2.4 | 3.1 | 2.8 | 5.0 | 2.4 | 3.1 |
| February | 1.2 | 2.4 | .6 | .4 | .4 | .5 | 2.1 | 3.2 | 2.4 | 4.4 | 2.1 | 3.2 |
| March | 1.7 | 3.1 | .7 | .5 | .4 | .6 | 2.8 | 4.2 | 3.0 | 5.2 | 2.8 | 4.2 |
| April | 2.1 | 3.6 | .6 | .5 | .4 | .6 | 3.1 | 4.6 | 3.3 | 5.8 | 3.1 | 4.6 |
| May | 2.4 | 3.5 | .7 | .5 | .4 | .5 | 3.5 | 4.4 | 4.0 | 5.1 | 3.5 | 4.4 |
| June | 2.2 | 3.2 | .6 | .4 | .4 | .5 | 3.2 | 4.2 | 3.4 | 5.0 | 3.2 | 4.2 |
| July | 2.3 | 3.0 | .5 | .4 | .4 | .5 | 3.2 | 3.9 | 4.0 | 5.2 | 3.2 | 3.9 |
| August | 2.7 | [1] 3.0 | .4 | [1] .5 | .4 | [1] .4 | 3.6 | [1] 3.9 | 4.7 | [1] 4.3 | 3.6 | [1] 3.9 |
| September | 3.3 | ------- | .4 | ------- | .4 | ------- | 4.2 | ------- | 4.7 | ------- | 4.2 | ------ |
| October | 2.7 | ------- | .4 | ------- | .4 | ------- | 3.6 | ------- | 4.8 | ------- | 3.6 | ------ |
| November | 2.1 | ------- | .4 | ------- | .4 | ------- | 2.9 | ------- | 4.1 | ------- | 2.9 | ------ |
| December | 1.7 | ------- | .4 | ------- | .4 | ------- | 2.5 | ------- | 3.2 | ------- | 2.5 | ------ |
| Average | 2.1 | ------- | .5 | ------- | .4 | ------- | 3.1 | ------- | 3.7 | ------- | 3.1 | ------ |

[1] Preliminary; subject to revision.

The total separation rate for August, 1929, was 45.4, compared with 46.5 for July, 1929. The quit rate and the discharge rate were both lower for August than for July, but there was an increase in the lay-off rate. The big change, however, came in the accession rate which was 61.4 for July, but fell to 50.4 for August.

Comparing August, 1929, with August, 1928, the total separation is higher this year than last, due to the fact that both the quit rate and the lay-off rate were higher. The discharge rate was slightly lower than during August, 1928. The accession rate was lower for August, 1929, than for August, 1928. This is the first month this year where the accession rate has fallen below the accession rate of the same month of 1928.

The bureau endeavors to reach the public with this labor-turnover index as early as possible. It is urged, therefore, that companies reporting direct to the bureau or to cooperating agencies, forward their reports as early as possible each month.

# HOUSING

## Building Permits in Principal Cities of the United States, First Half of 1929 [1]

THE Bureau of Labor Statistics here presents its semiannual report of building permits issued in cities of the United States having a population of 100,000 or over. A report was received from each of the 85 cities which fell in this class on July 1, 1928, according to estimates of the Bureau of the Census. The Bureau of the Census made no estimate for 1929. These 85 cities all reported last year for the first half of 1928.

The report form calls for the number and cost of each class of building for which permits were issued during the period. The reports cover the corporate limits of each city. Suburban developments lying outside the boundaries of the city are not included. This suburban development would add largely to the total building in the metropolitan area of some cities. Such outside territory is largely residential in character, although small stores, garages, and service stations are also built.

The costs here given are as stated by the builder on applying for his permit. They include the cost of the building only. No land costs are included.

The States of Massachusetts, Illinois, New York, New Jersey, and Pennsylvania are materially assisting the bureau in the collection of these data. Each of these States issues periodic reports on building conditions in the State.

Hearty cooperation is also received from the building officials in the cities scheduled. It was necessary to send agents of the bureau to only 5 of the 85 cities to compile the data from the city records. The building permit officials in 80 cities reported by mail.

Table 1 shows the total number of new buildings and the estimated cost of each of the different kinds of new buildings for which permits were issued in the 85 cities in the first six months of 1929, the per cent that each kind forms of the total number, the per cent that the cost of each kind forms of the total cost, and the average cost per building.

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[1] Earlier reports concerning building permits issued in the United States are published in Bulletins Nos. 295, 318, 347, 368, 397, 424, 449 and 469 of the Bureau of Labor Statistics; also in issues of the Labor Review for July, 1921; April, 1922; July and October, 1923; June and October, 1924; June, September, and October, 1925; June, July, and October, 1926; May, June, July, October, and November, 1927; May, June, October, and November, 1928; and May and June, 1929.

TABLE 1.—NUMBER AND COST OF NEW BUILDINGS FOR WHICH PERMITS WERE ISSUED IN 85 CITIES, JANUARY 1 TO JUNE 30, 1929, BY KIND OF BUILDING

| Kind of building | Buildings for which permits were issued | | | | |
|---|---|---|---|---|---|
| | Number | Per cent of grand total | Estimated cost | | |
| | | | Amount | Per cent of grand total | Average per building |
| *Residential buildings* | | | | | |
| 1-family dwellings | 43,320 | 36.4 | $212,357,370 | 14.9 | $4,902 |
| 2-family dwellings | 6,488 | 5.5 | 49,049,636 | 3.5 | 7,560 |
| 1-family and 2-family dwellings with stores | 839 | .7 | 8,280,967 | .6 | 9,870 |
| Multi-family dwellings | 4,034 | 3.4 | 353,284,280 | 24.9 | 87,577 |
| Multi-family dwellings with stores | 334 | .3 | 22,815,236 | 1.6 | 68,309 |
| Hotels | 181 | .2 | 243,345,689 | 17.1 | 1,344,451 |
| Lodging houses | 8 | (1) | 155,525 | (1) | 19,441 |
| All other | 55 | (1) | 21,056,713 | 1.5 | 382,849 |
| Total | 55,259 | 46.5 | 910,345,416 | 64.1 | 16,474 |
| *Nonresidential buildings* | | | | | |
| Amusement buildings | 279 | .2 | 19,342,518 | 1.4 | 69,328 |
| Churches | 254 | .2 | 13,688,491 | 1.0 | 53,892 |
| Factories and workshops | 1,358 | 1.1 | 57,046,617 | 4.0 | 42,008 |
| Public garages | 1,368 | 1.2 | 21,851,457 | 1.5 | 15,973 |
| Private garages | 47,823 | 40.2 | 17,390,325 | 1.2 | 364 |
| Service stations | 1,263 | 1.1 | 5,540,076 | .4 | 4,386 |
| Institutions | 73 | .1 | 15,561,325 | 1.1 | 213,169 |
| Office buildings | 443 | .4 | 116,550,050 | 8.2 | 263,093 |
| Public buildings | 92 | .1 | 45,997,305 | 3.2 | 499,971 |
| Public works and utilities | 220 | .2 | 25,655,346 | 1.8 | 116,615 |
| Schools and libraries | 227 | .2 | 45,223,629 | 3.2 | 199,223 |
| Sheds | 4,030 | 3.4 | 1,759,969 | .1 | 437 |
| Stables and barns | 54 | (1) | 401,646 | (1) | 7,438 |
| Stores and warehouses | 4,544 | 3.8 | 121,051,138 | 8.5 | 26,640 |
| All other | 1,587 | 1.3 | 3,701,380 | .3 | 2,332 |
| Total | 63,615 | 53.5 | 510,761,272 | 35.9 | 8,029 |
| Grand total | 118,874 | 100.0 | 1,421,106,688 | 100.0 | 11,955 |

[1] Less than one-tenth of 1 per cent.

In the 85 cities of the country having a population of 100,000 or over, $1,421,106,688 was spent for the erection of new buildings, according to the permits issued during the first six months of 1929. Of this amount $910,345,416, or 64.1 per cent, was spent for the erection of residential buildings and $510,761,272, or 35.9 per cent, for nonresidential buildings.

Apartment houses accounted for the largest part of the expenditure for residential buildings, followed by hotels and 1-family dwellings in the order named.

It seems an astonishing fact that in the cities of the United States having a population of 100,000 or over more money would be expended for the erection of hotels during a 6-month period than for 1-family dwellings: yet during the first half of 1929 this happened. The expenditure for hotels in these 85 cities reached a total of $31,000,000 more than the expenditure for 1-family dwellings. The great expenditure for hotels is accounted for in a large measure by the great hotels erected in New York City. Permits were issued in that city for 121 hotels at an estimated expenditure of $231,920,000.

Among the nonresidential buildings stores and warehouses accounted for the greatest amount expended, the $121,051,138 spent for this class of building being 8.5 per cent of the total building expenditure during the period. Office buildings were a very close second, accounting for 8.2 per cent of the total amount spent.

Of the 118,874 buildings for which permits were issued in these 85 cities during the first half of 1929, 55,259, or 46.5 per cent, were residential buildings, and 63,615 or 53.5 per cent were nonresidential buildings. Private garages were the most numerous class of buildings, accounting for 40.2 per cent of the grand total. One-family dwellings made up 36.4 per cent of the grand total of new buildings for which permits were issued during this period. Only one other class of building, 2-family dwellings, forms as much as 5 per cent.

The average cost of all buildings for which permits were issued during this period was $11,955. The average cost of residential buildings was $16,474; of nonresidential buildings, $8,029. If private garages and sheds, which average only $364 and $437, respectively, are excluded, the average cost per building of the remaining nonresidential buildings was $20,918.

Hotels cost more per building than any other class of structure, their average cost being $1,344,451. "Other residential" buildings, which include clubs and association buildings, averaged $382,849 per building. In the nonresidential group public buildings were the most costly, averaging $499,971. There were only 92 public buildings erected during the 6-month period. The high average cost per building of this class of structure was caused by two buildings in Washington which are to cost $19,000,000. Institutional buildings, office buildings, public works and utilities, and schools and libraries all averaged over $100,000 per building.

## Comparison of 1928 and 1929

TABLE 2 SHOWS the number and cost of the different kinds of buildings for which permits were issued in the 85 identical cities for the first half of each year 1928 and 1929 and the percentage of increase or decrease in the number and in the cost in the first half of 1929 as compared with the first half of 1928.

TABLE 2.—NUMBER AND COST OF NEW BUILDINGS FOR WHICH PERMITS WERE ISSUED IN 85 CITIES DURING THE FIRST HALF OF 1928 AND THE FIRST HALF OF 1929, BY KIND OF BUILDING

| Kind of building | New buildings for which permits were issued during first half of — | | | | Per cent of change, 1929, as compared with 1928 | |
|---|---|---|---|---|---|---|
| | 1928 | | 1929 | | | |
| | Number | Cost | Number | Cost | Number | Cost |
| *Residential buildings* | | | | | | |
| 1-family dwellings | 59,861 | $291,080,646 | 43,320 | $212,357,370 | −27.6 | −27.0 |
| 2-family dwellings | 9,190 | 71,586,825 | 6,488 | 49,049,636 | −29.4 | −31.5 |
| 1-family and 2-family dwellings with stores | 1,340 | 14,057,773 | 839 | 8,280,967 | −37.4 | −41.1 |
| Multi-family dwellings | 6,068 | 429,009,191 | 4,034 | 353,284,280 | −33.5 | −17.7 |
| Multi-family dwellings with stores | 680 | 41,436,804 | 334 | 22,815,236 | −50.9 | −44.9 |
| Hotels | 117 | 76,717,000 | 181 | 243,345,689 | +54.7 | +217.2 |
| Lodging houses | 9 | 152,200 | 8 | 155,525 | −11.1 | +2.2 |
| All other | 112 | 15,763,447 | 55 | 21,056,713 | −50.9 | +33.6 |
| Total | 77,377 | 939,803,886 | 55,259 | 910,345,416 | −28.6 | −3.1 |

TABLE 2.—NUMBER AND COST OF NEW BUILDINGS FOR WHICH PERMITS WERE ISSUED IN 85 CITIES DURING THE FIRST HALF OF 1928 AND THE FIRST HALF OF 1929, BY KIND OF BUILDING—Continued

| Kind of building | New buildings for which permits were issued during first half of— | | | | Per cent of change, 1929, as compared with 1928 | |
|---|---|---|---|---|---|---|
| | 1928 | | 1929 | | | |
| | Number | Cost | Number | Cost | Number | Cost |
| *Nonresidential buildings* | | | | | | |
| Amusement buildings | 504 | $32,885,048 | 279 | $19,342,518 | −44.6 | −41.2 |
| Churches | 337 | 18,930,889 | 254 | 13,688,491 | −24.6 | −27.7 |
| Factories and workshops | 1,284 | 55,958,789 | 1,358 | 57,046,617 | +5.8 | +1.9 |
| Public garages | 1,365 | 27,443,246 | 1,368 | 21,851,457 | +.2 | −20.4 |
| Private garages | 56,255 | 19,436,219 | 47,823 | 17,390,325 | −15.0 | −10.5 |
| Service stations | 1,641 | 5,172,024 | 1,263 | 5,540,076 | −23.0 | +7.1 |
| Institutions | 86 | 25,592,883 | 73 | 15,561,325 | −15.1 | −39.2 |
| Office buildings | 515 | 112,567,168 | 443 | 116,550,050 | −14.0 | +3.5 |
| Public buildings | 82 | 9,319,047 | 92 | 45,997,305 | +12.2 | +393.6 |
| Public works and utilities | 150 | 19,022,342 | 220 | 25,655,346 | +46.7 | +34.9 |
| Schools and libraries | 261 | 45,688,910 | 227 | 45,223,629 | −13.0 | −1.0 |
| Sheds | 4,117 | 1,805,728 | 4,030 | 1,759,969 | −2.1 | −2.5 |
| Stables and barns | 108 | 161,967 | 54 | 401,646 | −50.0 | +148.0 |
| Stores and warehouses | 4,807 | 98,529,541 | 4,544 | 121,051,138 | −5.5 | +22.9 |
| All other | 1,978 | 4,436,149 | 1,587 | 3,701,380 | −19.8 | −16.6 |
| Total | 73,490 | 476,949,950 | 63,615 | 510,761,272 | −13.4 | +7.1 |
| Grand total | 150,867 | 1,416,753,836 | 118,874 | 1,421,106,688 | −21.2 | +.3 |

During the first half of 1929 permits were issued for 118,874 new buildings in the 85 cities, as compared with 150,867 during the first half of 1928, a decrease of 21.2 per cent. The money expended for the erection of these buildings, however, showed an increase of three-tenths of 1 per cent. Residential buildings showed a decrease of 28.6 per cent in number and 3.1 per cent in money expended. Nonresidential buildings showed a decrease in number of 13.4 per cent but an increase in expenditure of 7.1 per cent.

Among residential buildings, expenditures for hotels, lodging houses, and "other residential" showed an increase in expenditure in the first half of 1929 over the first half of 1928. Expenditures for all the other classes of residential buildings showed a decrease.

Had it not been for the large increase in expenditures for hotels and public buildings there would have been a decrease in the total expenditures for new buildings in comparing the first half of 1929 with the first half of 1928. The amount expended for public buildings during the period from January to June, 1929, was five times as much as the expenditures for such buildings during the same period of the previous year. The expenditure for hotels was more than three times as much.

The increase of approximately $36,000,000 for buildings erected by public funds came at a period when it was most needed. The building of public projects at times when there is a slump in general building can do much to stabilize building conditions.

In the nonresidential group, in addition to public buildings, there was an increase in expenditures for factories, service stations, public works and utilities, stables and barns, and stores and warehouses. Decreases in expenditures were shown for each of the other classes of nonresidential buildings.

A decrease was shown in the number of buildings for which permits were issued in all classes of residential buildings excepting hotels, in comparing the first half of 1929 with the first half of 1928. In the nonresidential group there was an increase in the number of factories, public garages, public buildings, public works and utilities, and a decrease in the number of each of the other kinds of buildings erected.

The decreases ranged in the residential group from 11.1 in the number of lodging houses erected to 50.9 in the number of "all other residential buildings" erected. In the nonresidential group the range in decrease was from 2.1 per cent in the number of sheds to 50 per cent in the number of stables and barns. The increases in the number of nonresidential buildings reached from two-tenths of 1 per cent in public garages to 46.7 per cent in public works and utilities.

## Families Provided for, 1928 and 1929

TABLE 3 SHOWS the number and per cent of families provided for by each of the different kinds of dwellings for which permits were issued in the 85 identical cities during the first half of 1928 and the first half of 1929, by kind of dwelling.

TABLE 3.—NUMBER AND PER CENT OF FAMILIES TO BE HOUSED IN NEW DWELLINGS FOR WHICH PERMITS WERE ISSUED IN 85 IDENTICAL CITIES DURING THE FIRST HALF OF 1928 AND THE FIRST HALF OF 1929, BY KIND OF BUILDING

| Kind of dwelling | Number of dwellings for which permits were issued | | Families provided for | | | |
|---|---|---|---|---|---|---|
| | | | Number | | Per cent | |
| | First half 1928 | First half 1929 | First half 1928 | First half 1929 | First half 1928 | First half 1929 |
| 1-family dwellings | 59,861 | 43,320 | 59,861 | 43,320 | 30.7 | 30.5 |
| 2-family dwellings | 9,190 | 6,488 | 18,380 | 12,976 | 9.4 | 9.1 |
| 1-family and 2-family dwellings with stores | 1,340 | 839 | 2,283 | 1,338 | 1.2 | .9 |
| Multi-family dwellings | 6,068 | 4,034 | 105,980 | 79,266 | 54.3 | 55.8 |
| Multi-family dwellings with stores | 680 | 334 | 8,712 | 5,166 | 4.5 | 3.6 |
| Total | 77,139 | 55,015 | 195,216 | 142,066 | 100.0 | 100.0 |

During the first half of 1929 in the eighty-five cities accommodations were provided in new buildings for 142,066 families compared with 195,216 during the corresponding period of 1928, a decrease of 27.2 per cent in the number of dwelling places provided in new buildings.

The number of family accommodations provided for in each of the four classes of dwellings decreased during the first half of 1929 as compared with the first half of 1928. During the first half of 1928 permits were issued for new 1-family dwellings to accommodate 59,861 families, while only 43,320 were provided for by this class of dwelling during the first six months of 1929. Apartment houses provided for 105,980 families during the first half of 1928, but only 79,266 during the like period of 1929.

There was very little change in the relative percentage housed in 1-family dwellings and multifamily dwellings in the two 6-month periods under discussion. In the first half of 1928 new family accom-

modations in 1-family dwellings comprised 30.7 per cent of the total number provided for, compared with 30.5 in the first half of 1929. Multi-family dwellings provided for 54.3 per cent of the new family-dwelling places during the first half of 1928 and for 55.8 per cent during the first half of 1929. The percentage of families housed in 2-family dwellings decreased from 9.4 in the first six months of 1928 to 9.1 during the similar period of 1929.

Table 4 shows the total number and estimated cost of all buildings for which permits were issued in the **65** cities from which reports were received for the first half of each year back to 1922. Unfortunately semiannual figures are unavailable for the other 20 cities included in the preceding tables.

TABLE 4.—NUMBER AND ESTIMATED COST OF ALL BUILDINGS FOR WHICH PERMITS WERE ISSUED IN 65 IDENTICAL CITIES IN THE FIRST SIX MONTHS OF EACH OF THE YEARS 1922 TO 1929, INCLUSIVE

| Period | Number of buildings | | Estimated cost | |
|---|---|---|---|---|
| | Number | Index number | Cost | Index number |
| First half of— | | | | |
| 1922 | 243,479 | 100.0 | $1,062,464,771 | 100.0 |
| 1923 | 283,289 | 116.4 | 1,418,779,382 | 133.5 |
| 1924 | 299,769 | 123.1 | 1,518,088,421 | 142.9 |
| 1925 | 289,014 | 118.7 | 1,620,413,012 | 152.5 |
| 1926 | 254,564 | 104.6 | 1,539,207,242 | 144.9 |
| 1927 | 237,853 | 97.7 | 1,443,232,520 | 135.8 |
| 1928 | 216,509 | 88.9 | 1,462,560,722 | 137.7 |
| 1929 | 182,379 | 74.9 | 1,479,460,210 | 139.2 |

The total amount expended for the construction of new buildings and repairs to old buildings in the **65** identical cities from which reports were received for each half yearly period since 1922 was $1,479,460,210 during the first half of 1929, an increase of 39.2 per cent over the amount expended during the first half of 1922, but 8.7 per cent less than during the peak reached during the first half of 1925. There was a steady increase in expenditure for construction from 1922 to 1925 when a peak of 152.5 was reached. There was then a decline to a low of 135.8 during the first half of 1927 and a slight increase in both the first half of 1928 and the first half of 1929.

The number of buildings for which permits were issued in these 65 cities reached a peak of 299,769 during the first half of 1924. This was 23.1 per cent more than the number for which permits were issued during the first half of 1922. Since 1924, however, there has been a gradual decrease, which still continues during the first half of 1929 permits were issued for only 182,379 buildings—74.9 per cent of the number issued during the first half of 1922.

Table 5 shows the number and percentage distribution of families provided for in the different kinds of dwellings in the **65** identical cities from which reports were received for the first six months of each of the years 1922 to 1929. For convenience 1-family dwellings and 2-family dwellings with stores are grouped with 2-family dwellings, and multi-family dwellings with stores are grouped with multi-family dwellings.

TABLE 5.—NUMBER AND PER CENT OF FAMILIES PROVIDED FOR IN THE DIFFERENT KINDS OF DWELLINGS IN 65 IDENTICAL CITIES IN THE FIRST HALF OF 1922 TO 1929, INCLUSIVE

| Period | Number of families provided for in— | | | | Per cent of families provided for in— | | |
|---|---|---|---|---|---|---|---|
| | 1-family dwellings | 2-family dwellings [1] | Multi-family dwellings [2] | All classes of dwellings | 1-family dwellings | 2-family dwellings [1] | Multi-family dwellings [2] |
| First half of— | | | | | | | |
| 1922 | 63,892 | 32,321 | 51,006 | 147,249 | 43.4 | 22.0 | 34.6 |
| 1923 | 77,875 | 39,314 | 77,826 | 195,015 | 39.9 | 20.2 | 39.9 |
| 1924 | 82,514 | 50,904 | 69,619 | 203,037 | 40.6 | 25.1 | 34.3 |
| 1925 | 87,783 | 39,320 | 80,291 | 207,394 | 42.3 | 19.0 | 38.7 |
| 1926 | 71,818 | 26,727 | 100,201 | 198,746 | 36.1 | 13.4 | 50.4 |
| 1927 | 57,899 | 24,204 | 95,448 | 177,551 | 32.6 | 13.6 | 53.8 |
| 1928 | 50,724 | 19,261 | 111,268 | 181,252 | 28.0 | 10.6 | 61.2 |
| 1929 | 36,237 | 12,815 | 81,205 | 130,257 | 27.8 | 9.8 | 62.3 |

[1] Includes 1-family and 2-family dwellings with stores.
[2] Includes multi-family dwellings with stores.

In the 65 identical cities from which reports have been received for each 6-month period from 1922 to 1929, inclusive, 130,257 family dwelling places were provided in new buildings according to permits issued during the first six months of 1929. This compares with 147,249 during the first half of 1922, and with 207,394, the peak, reached during the first half of 1925.

The number of families provided for in 1-family dwellings and in 2-family dwellings was less during the first half of 1929 than during any similar period in these eight years. The number provided for in apartment houses in the first half of the current year was less than for any year since 1925. The peak of apartment-house construction was reached in these cities during the first half of 1928.

During the first half of 1922 the percentage of families provided for in 1-family dwellings was 43.4; in apartment houses, 34.6; and in 2-family dwellings, 22. During the same period in 1929 the percentage housed in apartment houses had risen to 62.3, while the percentage provided for in 1-family dwellings had fallen to 27.8 and in 2-family dwellings to 9.8.

## Per Capita Expenditures for Buildings

TABLE 6 SHOWS the per capita expenditure for new buildings of all kinds; for repairs, additions, and alterations to old buildings; for the two items combined; and for *new* housekeeping dwellings, in the first half of 1929 in 78 cities in which the population was estimated by the Census Bureau for 1928.

TABLE 6.—PER CAPITA EXPENDITURE FOR NEW BUILDINGS, NEW HOUSEKEEPING DWELLINGS, AND FOR ADDITIONS AND REPAIRS TO OLD BUILDINGS IN 78 CITIES IN THE FIRST SIX MONTHS OF 1929—Continued.

| City and State | Estimated population, July 1, 1928 | Per capita expenditure for— | | | Rank in per capita expenditure for all buildings | Per capita expenditure for new housekeeping dwellings |
|---|---|---|---|---|---|---|
| | | New buildings | Repairs, additions, and alterations | All buildings | | |
| Albany, N. Y. | 120,400 | $43.90 | $9.63 | $53.53 | 7 | $20.05 |
| Atlanta, Ga. | 255,100 | 23.04 | 9.82 | 32.86 | 21 | 11.77 |
| Baltimore, Md. | 830,400 | 15.91 | 4.33 | 20.24 | 48 | 8.96 |
| Birmingham, Ala. | 222,400 | 23.32 | 2.97 | 26.30 | 36 | 5.48 |
| Boston, Mass. | 799,200 | 32.25 | 5.81 | 38.06 | 15 | 14.12 |
| Buffalo, N. Y. | 555,800 | 12.75 | 1.16 | 13.91 | 63 | 5.53 |
| Cambridge, Mass. | 125,800 | 46.25 | 9.28 | 55.54 | 6 | 27.40 |
| Camden, N. J. | 135,400 | 10.44 | 2.62 | 13.05 | 64 | 4.18 |
| Canton, Ohio | 116,800 | 14.86 | 1.17 | 16.03 | 60 | 8.98 |
| Chicago, Ill. | 3,155,600 | 36.38 | 1.30 | 37.68 | 16 | 18.42 |
| Cincinnati, Ohio | 413,700 | 30.82 | 3.05 | 33.87 | 20 | 19.06 |
| Cleveland, Ohio | 1,010,300 | 14.31 | 4.04 | 18.35 | 58 | 7.39 |
| Columbus, Ohio | 299,000 | 17.63 | 2.52 | 20.15 | 49 | 14.40 |
| Dallas, Tex. | 217,800 | 18.12 | 6.28 | 24.40 | 38 | 8.14 |
| Dayton, Ohio | 184,500 | 15.41 | 3.26 | 18.66 | 54 | 3.31 |
| Denver, Colo. | 294,200 | 37.14 | 3.28 | 40.42 | 14 | 12.87 |
| Des Moines, Iowa | 151,900 | 8.01 | 1.41 | 9.42 | 73 | 6.39 |
| Detroit, Mich. | 1,378,900 | 35.25 | 5.26 | 40.51 | 13 | 22.42 |
| Duluth, Minn. | 116,800 | 5.87 | 3.90 | 9.77 | 72 | 4.22 |
| El Paso, Tex. | 117,800 | 11.87 | .67 | 12.53 | 66 | 7.61 |
| Fall River, Mass. | 134,300 | 1.37 | .66 | 2.04 | 78 | .68 |
| Flint, Mich. | 148,800 | 38.51 | 5.89 | 44.40 | 11 | 28.87 |
| Fort Wayne, Ind. | 105,300 | 20.33 | 8.12 | 28.45 | 29 | 13.49 |
| Fort Worth, Tex. | 170,600 | 33.77 | 3.60 | 37.36 | 17 | 17.86 |
| Grand Rapids, Mich. | 164,200 | 16.43 | 3.17 | 19.60 | 53 | 8.23 |
| Hartford, Conn. | 172,300 | 55.56 | 13.24 | 68.81 | 5 | 4.73 |
| Indianapolis, Ind. | 382,100 | 18.64 | 2.32 | 20.96 | 47 | 10.90 |
| Jacksonville, Fla. | 140,700 | 16.25 | 3.81 | 20.06 | 50 | 8.63 |
| Jersey City, N. J. | 324,700 | 29.29 | 1.69 | 30.98 | 23 | 11.80 |
| Kansas City, Kans. | 118,300 | 7.30 | .27 | 7.58 | 75 | 2.55 |
| Kansas City, Mo. | 391,000 | 14.35 | 1.14 | 15.49 | 62 | 11.10 |
| Knoxville, Tenn. | 105,400 | 28.45 | .89 | 29.34 | 28 | 13.18 |
| Long Beach, Calif. | 110,700 | 102.92 | 3.16 | 106.08 | 3 | 44.92 |
| Louisville, Ky. | 329,400 | 21.41 | 2.74 | 24.15 | 40 | 9.45 |
| Lowell, Mass. | 110,296 | 1.64 | 2.17 | 3.80 | 76 | .75 |
| Lynn, Mass. | 105,500 | 16.21 | 7.83 | 24.04 | 42 | 10.64 |
| Memphis, Tenn. | 190,200 | 20.20 | 3.93 | 24.14 | 41 | 13.35 |
| Miami, Fla. | 156,700 | 9.58 | 2.53 | 12.12 | 68 | 2.61 |
| Milwaukee, Wis. | 544,200 | 24.03 | 5.91 | 29.93 | 26 | 16.53 |
| Minneapolis, Minn. | 455,900 | 26.43 | 5.21 | 31.64 | 22 | 8.68 |
| Nashville, Tenn. | 139,600 | 21.78 | 4.79 | 26.57 | 34 | 11.93 |
| Newark, N. J. | 473,600 | 21.77 | 5.65 | 27.43 | 32 | 4.67 |
| New Bedford, Mass. | 119,539 | 2.17 | .81 | 2.98 | 77 | .80 |
| New Haven, Conn. | 187,900 | 19.22 | 3.02 | 22.24 | 44 | 4.74 |
| New Orleans, La. | 429,400 | 15.03 | 2.72 | 17.73 | 59 | 3.98 |
| New York, N. Y. | 6,017,500 | 107.95 | 7.41 | 115.35 | 2 | 44.97 |
| Norfolk, Va. | 184,200 | 7.43 | 1.44 | 8.87 | 74 | 4.22 |
| Oakland, Calif. | 274,100 | 24.44 | 3.67 | 28.11 | 31 | 11.85 |
| Omaha, Nebr. | 222,800 | 9.17 | 1.41 | 10.58 | 70 | 5.26 |
| Peterson, N. J. | 144,900 | 15.56 | 4.28 | 19.84 | 52 | 5.51 |
| Philadelphia, Pa. | 2,064,200 | 26.12 | 2.24 | 28.36 | 30 | 9.83 |
| Pittsburgh, Pa. | 673,800 | 22.81 | 3.65 | 26.46 | 35 | 9.26 |
| Providence, R. I. | 286,300 | 20.53 | 6.70 | 27.22 | 33 | 10.17 |
| Reading, Pa. | 115,400 | 31.22 | 3.87 | 35.09 | 19 | 7.83 |
| Richmond, Va. | 194,400 | 33.42 | 2.24 | 35.67 | 18 | 10.13 |
| Rochester, N. Y. | 328,200 | 21.12 | 3.99 | 25.10 | 37 | 5.02 |
| St. Louis, Mo. | 848,100 | 16.53 | 2.01 | 18.54 | 56 | 9.84 |
| Salt Lake City, Utah | 138,000 | 19.53 | 4.83 | 24.34 | 39 | 11.54 |
| San Antonio, Tex. | 218,100 | 46.87 | 4.54 | 51.41 | 9 | 14.97 |
| San Diego, Calif. | 119,700 | 40.97 | 3.48 | 44.45 | 10 | 22.57 |
| San Francisco, Calif. | 585,300 | 27.25 | 3.63 | 30.88 | 24 | 13.53 |
| Scranton, Pa. | 144,700 | 9.81 | 2.73 | 12.54 | 65 | 2.64 |
| Seattle, Wash. | 383,200 | 39.28 | 14.24 | 53.52 | 8 | 19.21 |
| Somerville, Mass. | 102,700 | 16.93 | 1.55 | 18.48 | 57 | 7.47 |
| Spokane, Wash. | 109,100 | 12.51 | 6.04 | 18.55 | 55 | 9.10 |
| Springfield, Mass. | 149,800 | 16.43 | 4.97 | 21.41 | 46 | 8.83 |
| Syracuse, N. Y. | 199,300 | 23.25 | 6.87 | 30.11 | 25 | 12.86 |
| Tacoma, Wash. | 110,500 | 19.96 | 3.16 | 23.12 | 43 | 7.64 |
| Tampa, Fla. | 113,400 | 9.32 | 2.63 | 11.95 | 69 | 2.28 |
| Toledo, Ohio | 313,200 | 18.20 | 3.90 | 22.10 | 45 | 10.26 |
| Trenton, N. J. | 139,000 | 8.59 | 3.81 | 12.40 | 67 | 2.71 |
| Tulsa, Okla. | 170,500 | 38.95 | 1.59 | 40.54 | 12 | 20.14 |
| Utica, N. Y. | 104,200 | 8.99 | 1.55 | 10.54 | 71 | 3.39 |

TABLE 6.—PER CAPITA EXPENDITURE FOR NEW BUILDINGS, NEW HOUSEKEEPING DWELLINGS, AND FOR ADDITIONS AND REPAIRS TO OLD BUILDINGS IN 78 CITIES IN THE FIRST SIX MONTHS OF 1929—Continued

| City and State | Estimated population, July 1, 1928 | Per capita expenditure for— | | | Rank in per capita expenditure for all buildings | Per capita expenditure for new housekeeping dwellings |
|---|---|---|---|---|---|---|
| | | New buildings | Repairs, additions, and alterations | All buildings | | |
| Washington, D. C | 552,000 | $66.10 | $3.73 | $69.83 | 4 | $22.77 |
| Wilmington, Del | 128,500 | 25.46 | 4.01 | 29.47 | 27 | 11.75 |
| Worcester, Mass | 197,600 | 13.26 | 6.78 | 20.04 | 51 | 5.53 |
| Yonkers, N. Y | 121,300 | 118.89 | 3.75 | 122.64 | 1 | 74.34 |
| Youngstown, Ohio | 174,200 | 14.82 | .95 | 15.76 | 61 | 8.79 |
| Total | 31,840,635 | 41.55 | 4.33 | 45.88 | | 18.55 |

The population of these 78 cities as estimated by the Bureau of the Census as of July 1, 1928, was 31,840,635. The per capita expenditure for new buildings in these cities was $41.55, and for repairs $4.33, making a per capita expenditure for all building operations of $45.88. Of the amount expended for new buildings, $18.55 was for housekeeping dwellings.

Yonkers, N. Y., ranked first in per capita expenditure with $122.64 expended for building operations per each inhabitant. New York City was second with a per capita expenditure of $115.35, followed by Long Beach with $106.08, Washington with $69.83, and Hartford with $68.81.

## Housing in Relation to Population

TABLE 7 GIVES detailed information concerning building operations in each of the 85 cities during the first half of 1928 and the first half of 1929, as shown by permits issued in these cities. Part 1 gives for each city, the number and cost of each kind of dwelling, the number of families provided for, and the ratio of families provided for to each 10,000 of population.

The population of these 85 cities is estimated at 33,570,795 as of July 1, 1928, using the last available census figures.

Accommodations were provided in new buildings for 142,066 families in these 85 cities during the first half of 1929 or at the rate of 42.3 families to each 10,000 of population, according to the 1928 estimate of population. During the first half of 1928 dwelling places were provided for 195,216 families, which is at the rate of 58.2 families to each 10,000 of population.

The following cities were the leading builders of homes during the first half of 1928 and the first half of 1929. The rates per 10,000 population shown are based on the population as estimated for July 1, 1928.

| | 1929 | | 1928 |
|---|---|---|---|
| Long Beach | 170.3 | Yonkers | 230.6 |
| Yonkers | 119.3 | Long Beach | 150.0 |
| New York | 80.0 | New York | 113.0 |
| Flint | 75.7 | San Diego | 98.0 |
| Tulsa | 64.4 | Seattle | 86.6 |

Part 2 of Table 7 shows the number and cost of nonresidential buildings for each city reporting. Part 3 shows the number and cost of alterations and repairs to old buildings, the number and cost of all building, the number and cost of installation permits, and the rank in cost of construction.

During the first half of 1928 permits were issued in these 85 cities for all kinds of buildings, including repairs, to the number of 248,731, and the estimated expenditure for these buildings was $1,551,120,307. During the first six months of 1929 permits were issued for 211,409 buildings to cost $1,570,145,411.

Permits were issued during the first half of 1928 for 97,864 repairs to old buildings at an estimated cost of $134,366,471. In the like period of 1929 the 92,535 repairs made cost $149,038,723.

The number and cost of installations were reported whenever such permits were issued by the building inspector. Comparing the first half of 1928 with the first half of 1929, it was found that during the former period 35,099 installations were made in the cities which reported on this class of structure at an expenditure of $19,636,882. During the latter period 42,258 installations were made at an estimated expenditure of $20,276,746.

Following is a list of the five leading cities in total expenditure for all classes of buildings the first half of 1928 and the first half of 1929.

| 1929 | | 1928 | |
|---|---|---|---|
| New York | $694, 118, 064 | New York | $557, 561, 891 |
| Chicago | 118, 898, 940 | Chicago | 184, 650, 200 |
| Philadelphia | 58, 533, 385 | Detroit | 65, 175, 361 |
| Detroit | 55, 855, 545 | Philadelphia | 63, 195, 840 |
| Los Angeles | 54, 071, 599 | Los Angeles | 52, 002, 570 |

Among these five leading cities New York and Los Angeles showed an increase comparing the first half of 1929 with the first half of 1928, while Chicago, Philadelphia, and Detroit showed a decrease.

TABLE 7.—NUMBER AND ESTIMATED COST OF BUILDINGS (NEW CONSTRUCTION, AND REPAIRS, ALTERATIONS, AND ADDITIONS TO OLD BUILDINGS) COVERED BY PERMITS ISSUED IN THE FIRST HALF OF 1928 AND OF 1929, BY INTENDED USE OF BUILDINGS

PART 1.—NEW RESIDENTIAL BUILDINGS

| City and State | First half of each year | Housekeeping dwellings | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 1-family dwellings | | | 2-family dwellings | | | 1-family and 2-family dwellings with stores | | | Multi-family dwellings | | | Multi-family dwellings with stores | | |
| | | Number | Cost | Families | Number | Cost | Families | Number | Cost | Families | Number | Cost | Families | Number | Cost | Families |
| Akron, Ohio | 1928 | 1,158 | $5,820,238 | 1,158 | 29 | $241,200 | 58 | | | | 30 | $402,900 | 145 | | | |
| | 1929 | 1,239 | 5,919,358 | 1,239 | 52 | 410,600 | 104 | | | | 28 | 753,000 | 198 | | | |
| Albany, N. Y. | 1928 | 142 | 2,149,400 | 142 | 47 | 1,160,000 | 94 | | | | 6 | 570,000 | 85 | | | |
| | 1929 | 97 | 1,280,500 | 97 | 18 | 290,500 | 36 | | | | 13 | 843,000 | 147 | | | |
| Atlanta, Ga. | 1928 | 747 | 3,149,700 | 747 | 123 | 522,249 | 246 | 3 | $4,150 | 3 | 68 | 1,057,950 | 481 | 1 | $2,500 | 3 |
| | 1929 | 446 | 2,062,805 | 446 | 83 | 306,860 | 166 | 6 | 10,400 | 6 | 29 | 622,950 | 289 | | | |
| Baltimore, Md. | 1928 | 1,707 | 6,829,000 | 1,707 | | | | | | | 7 | 1,135,000 | 276 | | | |
| | 1929 | 1,655 | 6,885,500 | 1,655 | 1 | 7,000 | 2 | | | | 2 | 550,000 | 124 | | | |
| Birmingham, Ala. | 1928 | 1,083 | 3,252,614 | 1,083 | | | | 7 | 28,900 | 7 | 61 | 1,089,731 | 534 | | | |
| | 1929 | 365 | 992,425 | 365 | 1 | 3,500 | 2 | | | | 13 | 222,000 | 117 | | | |
| Boston, Mass. | 1928 | 320 | 1,874,000 | 320 | 582 | 4,904,400 | 1,164 | | | | 324 | 7,581,700 | 2,198 | | | |
| | 1929 | 289 | 1,643,350 | 289 | 243 | 2,085,100 | 486 | 1 | 68,000 | 1 | 138 | 7,488,800 | 1,885 | | | |
| Bridgeport, Conn. | 1928 | 88 | 519,200 | 88 | 33 | 276,100 | 66 | | | | 12 | 191,600 | 36 | 4 | 205,000 | 52 |
| | 1929 | 93 | 593,660 | 93 | 47 | 298,700 | 94 | | | | 24 | 220,200 | 72 | | | |
| Buffalo, N. Y. | 1928 | 401 | 1,821,425 | 401 | 326 | 1,408,050 | 652 | 21 | 166,500 | 39 | 24 | 1,213,000 | 393 | 23 | 274,500 | 95 |
| | 1929 | 168 | 871,000 | 168 | 259 | 1,094,420 | 518 | 14 | 142,300 | 21 | 13 | 868,300 | 189 | 7 | 96,500 | 25 |
| Cambridge, Mass. | 1928 | 17 | 234,500 | 17 | 82 | 559,300 | 164 | | | | 12 | 1,924,000 | 513 | | | |
| | 1929 | 14 | 117,000 | 14 | 26 | 231,400 | 52 | | | | 15 | 3,098,000 | 662 | | | |
| Camden, N. J. | 1928 | 191 | 668,750 | 191 | | | | 5 | 33,500 | 10 | | | | | | |
| | 1929 | 138 | 450,300 | 138 | 12 | 51,000 | 24 | 6 | 64,300 | 10 | | | | | | |
| Canton, Ohio | 1928 | 211 | 1,188,250 | 211 | 2 | 15,300 | 4 | | | | 1 | 15,000 | 4 | 1 | 250,000 | 24 |
| | 1929 | 190 | 1,030,800 | 190 | 1 | 2,500 | 2 | | | | 1 | 16,000 | 10 | | | |
| Chicago, Ill. | 1928 | 2,396 | 15,323,050 | 2,396 | 618 | 6,604,400 | 1,236 | 110 | 1,663,200 | 148 | 893 | 72,403,200 | 14,158 | 137 | 10,812,500 | 1,947 |
| | 1929 | 1,592 | 10,779,100 | 1,592 | 339 | 4,044,900 | 678 | 69 | 884,700 | 81 | 641 | 36,511,500 | 9,570 | 81 | 5,901,400 | 1,294 |
| Cincinnati, Ohio | 1928 | 980 | 7,683,635 | 980 | 103 | 1,046,150 | 206 | | | | 46 | 3,089,000 | 801 | | | |
| | 1929 | 758 | 5,616,425 | 758 | 116 | 608,300 | 232 | | | | 20 | 1,661,500 | 332 | | | |
| Cleveland, Ohio | 1928 | 807 | 4,815,600 | 807 | 199 | 1,961,500 | 398 | 37 | 224,000 | 66 | 40 | 2,489,000 | 663 | 7 | 210,000 | 32 |
| | 1929 | 572 | 3,488,300 | 572 | 118 | 1,276,000 | 236 | 8 | 87,000 | 14 | 18 | 2,594,000 | 490 | 1 | 25,000 | 6 |
| Columbus, Ohio | 1928 | 964 | 4,874,100 | 964 | 98 | 801,200 | 196 | 3 | 18,500 | 3 | 52 | 1,360,000 | 384 | 15 | 531,000 | 100 |
| | 1929 | 515 | 2,909,500 | 515 | 32 | 292,500 | 64 | 3 | 16,500 | 3 | 57 | 1,018,000 | 280 | 3 | 69,000 | 18 |
| Dallas, Tex. | 1928 | 411 | 1,097,895 | 411 | 86 | 496,550 | 172 | | | | 12 | 247,250 | 82 | | | |
| | 1929 | 306 | 805,775 | 306 | 115 | 579,850 | 230 | | | | 30 | 369,500 | 246 | 1 | 18,000 | 4 |
| Dayton, Ohio | 1928 | 183 | 815,812 | 183 | 36 | 212,600 | 72 | | | | 25 | 787,500 | 274 | 2 | 68,000 | 12 |
| | 1929 | 69 | 374,967 | 69 | 8 | 55,060 | 16 | | | | 6 | 163,500 | 48 | 1 | 18,000 | 3 |

TABLE 7.—NUMBER AND ESTIMATED COST OF BUILDINGS (NEW CONSTRUCTION, AND REPAIRS, ALTERATIONS, AND ADDITIONS TO OLD BUILDINGS) COVERED BY PERMITS ISSUED IN THE FIRST HALF OF 1928 AND OF 1929, BY INTENDED USE OF BUILDINGS—Continued

PART 1.—NEW RESIDENTIAL BUILDINGS—Continued

| City and State | First half of each year | Housekeeping dwellings | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 1-family dwellings | | | 2-family dwellings | | | 1-family and 2-family dwellings with stores | | | Multi-family dwellings[1] | | | Multi-family dwellings with stores | | |
| | | Number | Cost | Families | Number | Cost | Families | Number | Cost | Families | Number | Cost | Families | Number | Cost | Families |
| Denver, Colo. | 1928 | 683 | $3,496,500 | 683 | 17 | $127,500 | 34 | | | | 34 | $1,469,000 | 453 | | | |
| | 1929 | 460 | 2,441,500 | 460 | 24 | 175,000 | 48 | | | | 24 | 1,169,500 | 488 | | | |
| Des Moines, Iowa | 1928 | 155 | 654,678 | 155 | 1 | 9,500 | 2 | | | | 2 | 88,000 | 63 | | | |
| | 1929 | 179 | 880,175 | 179 | 1 | 10,200 | 2 | | | | 6 | 80,500 | 24 | | | |
| Detroit, Mich. | 1928 | 3,526 | 18,656,701 | 3,526 | 1,354 | 9,283,267 | 2,708 | 18 | $243,800 | 25 | 220 | 8,803,020 | 2,774 | 42 | $1,221,095 | 224 |
| | 1929 | 3,555 | 18,713,632 | 3,555 | 912 | 6,492,098 | 1,824 | 14 | 233,200 | 21 | 178 | 4,727,973 | 1,773 | 44 | 774,236 | 165 |
| Duluth, Minn. | 1928 | 96 | 467,750 | 96 | 3 | 23,000 | 6 | 1 | 5,000 | 1 | | | | | | |
| | 1929 | 64 | 471,095 | 64 | 1 | 12,000 | 2 | | | | 1 | 10,000 | 4 | | | |
| El Paso, Tex. | 1928 | 85 | 309,192 | 85 | 1 | 6,000 | 2 | | | | 5 | 38,100 | 23 | | | |
| | 1929 | 199 | 698,094 | 199 | 12 | 60,875 | 24 | 2 | 7,600 | 4 | 9 | 112,300 | 93 | 1 | 18,000 | 16 |
| Fall River, Mass. | 1928 | 41 | 162,500 | 41 | 4 | 35,100 | 8 | | | | 3 | 34,000 | 9 | 1 | 11,500 | 3 |
| | 1929 | 17 | 60,550 | 17 | 3 | 30,500 | 6 | | | | | | | | | |
| Flint, Mich. | 1928 | 915 | 3,993,459 | 915 | 78 | 468,962 | 156 | 10 | 56,940 | 12 | 4 | 123,919 | 75 | 3 | 43,000 | 10 |
| | 1929 | 845 | 3,442,501 | 845 | 101 | 605,054 | 202 | 6 | 50,000 | 6 | 16 | 197,835 | 74 | | | |
| Fort Wayne, Ind. | 1928 | 211 | 1,105,097 | 211 | | | | 1 | 3,000 | 1 | | | | | | |
| | 1929 | 257 | 1,316,713 | 257 | 2 | 13,500 | 4 | | | | 1 | 90,000 | 31 | | | |
| Fort Worth, Tex. | 1928 | 1,074 | 4,702,190 | 1,074 | 24 | 144,000 | 48 | 9 | 55,000 | 15 | 36 | 708,415 | 289 | 14 | 72,160 | 45 |
| | 1929 | 633 | 2,565,281 | 633 | 17 | 93,500 | 34 | 8 | 24,000 | 16 | 24 | 323,690 | 105 | 2 | 40,000 | 6 |
| Grand Rapids, Mich. | 1928 | 462 | 1,889,895 | 462 | 18 | 110,000 | 36 | | | | | | | | | |
| | 1929 | 334 | 1,252,300 | 334 | 7 | 42,500 | 14 | | | | 4 | 57,000 | 23 | | | |
| Hartford, Conn. | 1928 | 55 | 761,917 | 55 | 41 | 411,700 | 82 | | | | 54 | 1,799,400 | 804 | 7 | 332,500 | 109 |
| | 1929 | 31 | 284,900 | 31 | 16 | 150,500 | 32 | | | | 13 | 380,300 | 131 | | | |
| Houston, Tex. | 1928 | 1,580 | 6,393,230 | 1,580 | 278 | 2,527,500 | 556 | 15 | 174,000 | 30 | 72 | 1,203,550 | 427 | 5 | 44,500 | 15 |
| | 1929 | 1,240 | 5,358,939 | 1,240 | 280 | 2,320,345 | 560 | 8 | 119,500 | 13 | 38 | 587,500 | 200 | 3 | 30,000 | 9 |
| Indianapolis, Ind. | 1928 | 719 | 3,378,885 | 719 | 89 | 426,350 | 178 | | | | 18 | 1,555,000 | 489 | 3 | 139,300 | 28 |
| | 1929 | 637 | 3,116,075 | 637 | 97 | 488,150 | 194 | | | | 11 | 550,000 | 233 | 1 | 12,500 | 8 |
| Jacksonville, Fla. | 1928 | 622 | 2,188,000 | 622 | 79 | 307,100 | 158 | 15 | 100,700 | 21 | 37 | 679,150 | 190 | 1 | 20,000 | 11 |
| | 1929 | 310 | 842,900 | 310 | 29 | 104,375 | 58 | 8 | 34,200 | 11 | 12 | 222,500 | 74 | 1 | 10,000 | 3 |
| Jersey City, N. J. | 1928 | 5 | 32,500 | 5 | 54 | 479,500 | 108 | 7 | 103,000 | 13 | 31 | 2,629,500 | 724 | 4 | 430,000 | 83 |
| | 1929 | 5 | 27,380 | 5 | 54 | 398,500 | 108 | 7 | 85,000 | 12 | 24 | 2,847,000 | 988 | 5 | 475,000 | 117 |
| Kansas City, Kans. | 1928 | 153 | 291,930 | 153 | | | | | | | 1 | 22,000 | 12 | | | |
| | 1929 | 132 | 301,250 | 132 | | | | | | | | | | | | |
| Kansas City, Mo. | 1928 | 507 | 2,368,700 | 507 | 22 | 203,000 | 44 | | | | 23 | 1,979,500 | 631 | 1 | 10,000 | 3 |
| | 1929 | 464 | 1,965,300 | 464 | 10 | 69,500 | 20 | 4 | 34,000 | 7 | 36 | 2,173,000 | 888 | 1 | 100,000 | 50 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Knoxville, Tenn. | 1928 | 383 | 1,267,524 | 383 | 18 | 102,600 | 36 | | | | 1 | 3,600 | 3 | | | | |
| | 1929 | 303 | 1,230,799 | 303 | 1 | 2,400 | 2 | 1 | 6,000 | 2 | 5 | 150,000 | 16 | | | | |
| Long Beach, Calif. | 1928 | 645 | 2,032,835 | 645 | 101 | 510,285 | 202 | 4 | 17,350 | 5 | 103 | 1,909,590 | 785 | 7 | 164,650 | 24 | |
| | 1929 | 727 | 2,405,180 | 727 | 137 | 726,500 | 274 | 5 | 20,800 | 6 | 111 | 1,778,150 | 865 | 4 | 42,500 | 13 | |
| Los Angeles, Calif. | 1928 | 3,657 | 14,067,810 | 3,657 | 512 | 3,677,329 | 1,024 | | | | 614 | 15,369,769 | 7,049 | | | | |
| | 1929 | 2,958 | 11,889,678 | 2,958 | 567 | 3,998,373 | 1,134 | | | | 523 | 11,331,310 | 5,087 | | | | |
| Louisville, Ky. | 1928 | 499 | 2,631,050 | 499 | 28 | 200,400 | 56 | 9 | 61,300 | 15 | 60 | 1,908,100 | 211 | 3 | 192,100 | 42 | |
| | 1929 | 244 | 1,110,050 | 244 | 156 | 942,160 | 312 | 54 | 358,740 | 83 | 44 | 522,000 | 254 | 8 | 179,500 | 57 | |
| Lowell, Mass. | 1928 | 21 | 74,350 | 21 | 1 | 5,000 | 2 | | | | | | | | | | |
| | 1929 | 19 | 75,625 | 19 | | | | 1 | 7,000 | 2 | | | | | | | |
| Lynn, Mass. | 1928 | 61 | 314,350 | 61 | 33 | 265,100 | 66 | | | | 10 | 433,750 | 144 | | | | |
| | 1929 | 61 | 331,800 | 61 | 12 | 103,300 | 24 | 1 | 8,500 | 1 | 10 | 679,000 | 231 | | | | |
| Memphis, Tenn. | 1928 | 455 | 2,047,500 | 455 | 78 | 366,250 | 156 | | | | 36 | 1,042,600 | 354 | | | | |
| | 1929 | 387 | 1,515,550 | 387 | 56 | 402,650 | 112 | | | | 31 | 621,400 | 252 | | | | |
| Miami, Fla. | 1928 | 85 | 383,175 | 85 | | | | | | | | | | 1 | 35,000 | 3 | |
| | 1929 | 64 | 374,570 | 64 | | | | | | | | | | 2 | 35,000 | 6 | |
| Milwaukee, Wis. | 1928 | 535 | 3,260,170 | 535 | 259 | 2,071,300 | 518 | 14 | 179,500 | 20 | 70 | 2,535,237 | 1,012 | 26 | 719,500 | 178 | |
| | 1929 | 554 | 3,035,025 | 554 | 253 | 1,959,800 | 506 | 13 | 164,800 | 18 | 82 | 3,313,152 | 1,210 | 14 | 521,500 | 110 | |
| Minneapolis, Minn. | 1928 | 647 | 2,707,230 | 647 | 72 | 489,750 | 144 | | | | 43 | 1,284,800 | 469 | | | | |
| | 1929 | 433 | 2,024,045 | 433 | 59 | 405,650 | 118 | | | | 39 | 1,528,000 | 455 | | | | |
| Nashville, Tenn. | 1928 | 301 | 648,505 | 301 | 8 | 16,800 | 16 | | | | 19 | 600,500 | 124 | 1 | 20,000 | 4 | |
| | 1929 | 259 | 858,629 | 259 | 11 | 46,418 | 22 | 1 | 2,000 | 1 | 4 | 758,000 | 282 | | | | |
| Newark, N. J. | 1928 | 30 | 295,223 | 30 | 125 | 1,468,070 | 250 | 20 | 293,200 | 38 | 131 | 8,056,080 | 1,624 | 14 | 775,000 | 134 | |
| | 1929 | 80 | 601,700 | 80 | 35 | 405,380 | 70 | 19 | 165,600 | 27 | 51 | 943,000 | 212 | 5 | 94,000 | 18 | |
| New Bedford, Mass. | 1928 | 19 | 160,000 | 19 | 3 | 28,300 | 6 | | | | | | | | | | |
| | 1929 | 14 | 95,400 | 14 | | | | | | | | | | | | | |
| New Haven, Conn. | 1928 | 61 | 468,500 | 61 | 10 | 93,000 | 20 | | | | 17 | 673,000 | 232 | 1 | 12,000 | 3 | |
| | 1929 | 80 | 542,000 | 80 | 6 | 59,000 | 12 | 3 | 28,900 | 5 | 6 | 261,000 | 94 | | | | |
| New Orleans, La. | 1928 | 241 | 936,450 | 241 | 375 | 1,002,060 | 750 | 63 | 761,833 | 116 | 18 | 182,890 | 58 | 3 | 49,260 | 12 | |
| | 1929 | 163 | 454,320 | 163 | 201 | 601,950 | 402 | 88 | 463,477 | 124 | 17 | 166,000 | 86 | 4 | 23,100 | 20 | |
| New York, N. Y.: | | | | | | | | | | | | | | | | | |
| The Bronx | 1928 | 742 | 5,148,800 | 742 | 364 | 3,823,885 | 728 | 31 | 452,000 | 58 | 585 | 85,300,000 | 20,484 | 35 | 6,262,500 | 1,225 | |
| | 1929 | 354 | 2,982,100 | 354 | 185 | 2,165,600 | 370 | 14 | 176,250 | 20 | 280 | 46,900,200 | 11,044 | 16 | 2,251,000 | 554 | |
| Brooklyn | 1928 | 1,632 | 11,204,400 | 1,632 | 813 | 7,780,700 | 1,626 | 346 | 4,509,500 | 692 | 619 | 42,224,400 | 11,134 | 182 | 7,370,500 | 1,902 | |
| | 1929 | 779 | 5,362,250 | 779 | 323 | 3,040,700 | 646 | 192 | 2,592,500 | 384 | 247 | 26,853,000 | 6,237 | 52 | 4,938,000 | 1,102 | |
| Manhattan | 1928 | 1 | 3,000 | 1 | 2 | 75,000 | 4 | | | | 141 | 59,840,000 | 8,531 | | | | |
| | 1929 | 3 | 380,000 | 3 | 1 | 20,000 | 2 | | | | 182 | 124,770,000 | 15,239 | | | | |
| Queens | 1928 | 5,328 | 29,064,970 | 5,328 | 530 | 4,342,900 | 1,060 | 367 | 3,271,100 | 652 | 498 | 34,647,400 | 10,100 | 40 | 3,755,500 | 876 | |
| | 1929 | 2,379 | 13,438,035 | 2,379 | 372 | 3,517,000 | 744 | 161 | 1,432,300 | 253 | 207 | 24,094,500 | 6,717 | 21 | 2,389,500 | 577 | |
| Richmond | 1928 | 648 | 2,861,864 | 648 | 59 | 456,300 | 118 | 22 | 201,000 | 35 | 15 | 1,519,000 | 422 | 3 | 82,000 | 24 | |
| | 1929 | 476 | 2,345,790 | 476 | 60 | 382,650 | 120 | 40 | 280,700 | 70 | 7 | 309,000 | 81 | | | | |
| Norfolk, Va. | 1928 | 158 | 609,900 | 158 | 1 | 6,000 | 2 | | | | 22 | 821,000 | 314 | 1 | 34,000 | 11 | |
| | 1929 | 136 | 703,475 | 136 | 1 | 5,700 | 2 | | | | 2 | 68,800 | 22 | | | | |
| Oakland, Calif. | 1928 | 548 | 2,138,683 | 548 | 10 | 50,000 | 20 | 7 | 26,300 | 7 | 42 | 1,576,900 | 631 | 1 | 45,000 | 18 | |
| | 1929 | 387 | 1,654,561 | 387 | 8 | 45,900 | 16 | 1 | 1,000 | 1 | 33 | 1,526,000 | 596 | 1 | 20,000 | 8 | |
| Oklahoma City, Okla. | 1928 | 1,156 | 3,718,690 | 1,156 | 1 | 2,500 | 2 | 2 | 25,700 | 4 | 38 | 621,550 | 272 | 1 | 10,000 | 4 | |
| | 1929 | 932 | 3,570,145 | 932 | 142 | 817,300 | 284 | 2 | 1,150 | 2 | 59 | 1,214,500 | 510 | 11 | 130,500 | 50 | |
| Omaha, Nebr. | 1928 | 168 | 945,300 | 168 | 4 | 80,000 | 8 | | | | 3 | 95,000 | 25 | | | | |
| | 1929 | 175 | 910,550 | 175 | 4 | 40,500 | 8 | | | | 4 | 220,000 | 75 | | | | |
| Paterson, N. J. | 1928 | 77 | 310,500 | 77 | 36 | 246,363 | 72 | 9 | 73,300 | 13 | 15 | 512,000 | 171 | 1 | 12,000 | 4 | |
| | 1929 | 68 | 320,650 | 68 | 38 | 249,200 | 76 | 7 | 50,800 | 11 | 7 | 131,000 | 62 | 7 | 47,000 | 32 | |

TABLE 7.—NUMBER AND ESTIMATED COST OF BUILDINGS (NEW CONSTRUCTION, AND REPAIRS, ALTERATIONS, AND ADDITIONS TO OLD BUILDINGS) COVERED BY PERMITS ISSUED IN THE FIRST HALF OF 1928 AND OF 1929, BY INTENDED USE OF BUILDINGS—Continued

PART 1.—NEW RESIDENTIAL BUILDINGS—Continued

| City and State | First half of each year | Housekeeping dwellings | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 1-family dwellings | | | 2-family dwellings | | | 1-family and 2-family dwellings with stores | | | Multi-family dwellings | | | Multi-family dwellings with stores | | |
| | | Number | Cost | Families | Number | Cost | Families | Number | Cost | Families | Number | Cost | Families | Number | Cost | Families |
| Philadelphia, Pa. | 1928 | 4,733 | $20,697,790 | 4,733 | 20 | $258,300 | 40 | 86 | $500,950 | 95 | 25 | $8,005,600 | 1,450 | 21 | $2,001,400 | 405 |
| | 1929 | 2,932 | 12,271,535 | 2,932 | 63 | 1,050,050 | 126 | | | | 46 | 6,979,000 | 1,396 | | | |
| Pittsburgh, Pa. | 1928 | 891 | 5,515,611 | 891 | 47 | 442,275 | 94 | 7 | 24,800 | 7 | 8 | 252,000 | 71 | 3 | 18,000 | 15 |
| | 1929 | 659 | 3,999,250 | 659 | 49 | 419,400 | 98 | 6 | 39,500 | 8 | 18 | 1,683,700 | 464 | 3 | 98,000 | 21 |
| Portland, Oreg. | 1928 | 1,021 | 4,410,510 | 1,021 | 34 | 272,000 | 68 | | | | 22 | 899,500 | 220 | 3 | 150,000 | 20 |
| | 1929 | 611 | 3,001,100 | 611 | 8 | 36,150 | 16 | | | | 18 | 1,037,500 | 296 | | | |
| Providence, R. I. | 1928 | 247 | 2,374,200 | 247 | 110 | 1,159,000 | 220 | 4 | 50,500 | 5 | 25 | 634,500 | 167 | 3 | 55,000 | 15 |
| | 1929 | 182 | 1,513,600 | 182 | 61 | 539,100 | 122 | 8 | 121,000 | 13 | 9 | 597,000 | 104 | 2 | 140,000 | 33 |
| Reading, Pa. | 1928 | 141 | 808,050 | 141 | | | | 1 | 6,000 | 1 | | | | | | |
| | 1929 | 133 | 827,075 | 133 | | | | 2 | 16,000 | 2 | | | | 1 | 60,000 | 17 |
| Richmond, Va. | 1928 | 345 | 1,707,931 | 345 | 22 | 144,200 | 44 | | | | 3 | 420,000 | 81 | | | |
| | 1929 | 283 | 1,397,285 | 283 | 24 | 217,400 | 48 | | | | 6 | 355,000 | 138 | | | |
| Rochester, N. Y. | 1928 | 445 | 2,480,115 | 445 | 39 | 327,000 | 78 | 2 | 18,500 | 3 | 20 | 1,548,000 | 556 | 9 | 218,089 | 69 |
| | 1929 | 259 | 1,465,238 | 259 | 5 | 52,000 | 10 | 1 | 6,500 | 1 | | | | 3 | 124,000 | 45 |
| St. Louis, Mo. | 1928 | 934 | 3,380,400 | 934 | 431 | 2,707,650 | 862 | 23 | 260,300 | 35 | 249 | 4,013,000 | 2,037 | 20 | 657,000 | 227 |
| | 1929 | 732 | 2,897,350 | 732 | 185 | 1,226,300 | 370 | 8 | 87,500 | 14 | 194 | 3,673,000 | 1,755 | 9 | 465,000 | 178 |
| St. Paul, Minn. | 1928 | 308 | 1,797,666 | 308 | 14 | 145,800 | 28 | | | | 2 | 180,000 | 38 | | | |
| | 1929 | 229 | 1,068,996 | 229 | 10 | 110,400 | 20 | 3 | 59,400 | 3 | 3 | 118,800 | 33 | | | |
| Salt Lake City, Utah | 1928 | 232 | 946,410 | 232 | 41 | 58,900 | 82 | | | | 5 | 388,000 | 153 | | | |
| | 1929 | 246 | 980,280 | 246 | 12 | 27,700 | 24 | | | | 6 | 585,000 | 165 | | | |
| San Antonio, Tex. | 1928 | 1,140 | 4,289,703 | 1,140 | 44 | 306,200 | 88 | | | | 30 | 567,040 | 500 | | | |
| | 1929 | 849 | 2,466,602 | 849 | 74 | 423,778 | 148 | | | | 30 | 373,375 | 140 | | | |
| San Diego, Calif. | 1928 | 818 | 3,139,861 | 818 | 20 | 78,800 | 40 | | | | 31 | 682,500 | 285 | 7 | 101,250 | 30 |
| | 1929 | 580 | 2,312,462 | 580 | 14 | 65,750 | 28 | 11 | 83,500 | 19 | 26 | 239,625 | 134 | | | |
| San Francisco, Calif. | 1928 | 1,320 | 5,867,309 | 1,320 | 94 | 794,795 | 188 | 4 | 27,500 | 8 | 114 | 4,788,200 | 2,037 | 5 | 250,000 | 60 |
| | 1929 | 742 | 3,573,894 | 742 | 57 | 492,990 | 114 | 9 | 94,500 | 16 | 76 | 3,756,300 | 1,223 | | | |
| Scranton, Pa. | 1928 | 70 | 326,850 | 70 | 13 | 96,710 | 26 | 3 | 17,000 | 6 | 2 | 257,500 | 27 | | | |
| | 1929 | 58 | 271,965 | 58 | 8 | 48,300 | 16 | | | | 3 | 62,000 | 15 | | | |
| Seattle, Wash. | 1928 | 1,405 | 4,849,975 | 1,405 | 7 | 41,550 | 14 | | | | 99 | 5,764,000 | 1,900 | | | |
| | 1929 | 1,019 | 3,685,420 | 1,019 | 4 | 15,200 | 8 | | | | 57 | 3,662,500 | 1,045 | | | |
| Somerville, Mass. | 1928 | | | | 11 | 91,000 | 22 | | | | 1 | 125,000 | 33 | | | |
| | 1929 | 11 | 61,500 | 11 | 19 | 147,000 | 38 | | | | 11 | 559,000 | 176 | | | |
| Spokane, Wash. | 1928 | 273 | 1,041,350 | 273 | | | | 2 | 5,000 | 2 | 1 | 16,000 | 6 | | | |
| | 1929 | 209 | 760,050 | 209 | | | | 2 | 8,300 | 2 | 1 | 225,000 | 65 | | | |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Springfield, Mass | 1928 | 242 | 1,460,050 | 242 | 33 | 204,400 | 66 | | | | 6 | 325,000 | 92 | | 150,000 | 24 |
| | 1929 | 171 | 869,150 | 171 | 16 | 104,100 | 32 | | | | 3 | 350,000 | 116 | | | |
| Syracuse, N. Y | 1928 | 415 | 2,512,700 | 415 | 49 | 430,500 | 98 | 19 | 134,000 | 28 | 15 | 976,000 | 286 | 5 | 490,000 | 118 |
| | 1929 | 341 | 2,080,900 | 341 | 39 | 337,000 | 78 | 3 | 37,500 | 5 | 3 | 107,000 | 29 | | | |
| Tacoma, Wash | 1928 | 332 | 966,550 | 332 | | | | | | | 5 | 470,000 | 129 | 2 | 37,000 | 26 |
| | 1929 | 192 | 544,500 | 192 | | | | | | | 2 | 225,000 | 92 | 1 | 75,000 | 13 |
| Tampa, Fla | 1928 | 390 | 947,280 | 390 | | | | 6 | 34,500 | 6 | 2 | 17,200 | 8 | | | |
| | 1929 | 126 | 237,045 | 126 | | | | 7 | 21,800 | 7 | | | | | | |
| Toledo, Ohio | 1928 | 710 | 2,966,100 | 710 | 39 | 292,650 | 78 | 7 | 24,750 | 10 | 6 | 208,000 | 62 | 2 | 32,000 | 8 |
| | 1929 | 551 | 2,292,600 | 551 | 32 | 199,500 | 64 | 6 | 42,000 | 6 | 28 | 181,270 | 141 | 9 | 499,000 | 152 |
| Trenton, N. J | 1928 | 103 | 478,700 | 103 | | | | | | | 3 | 100,000 | 28 | 1 | 18,500 | 5 |
| | 1929 | 46 | 376,864 | 46 | | | | | | | | | | | | |
| Tulsa, Okla | 1928 | 555 | 2,556,980 | 555 | 132 | 579,225 | 264 | | | | 27 | 718,100 | 260 | | | |
| | 1929 | 506 | 2,277,322 | 506 | 82 | 361,600 | 164 | | | | 30 | 795,550 | 428 | | | |
| Utica, N. Y | 1928 | 111 | 756,650 | 111 | 8 | 61,500 | 16 | 2 | 18,000 | 2 | 2 | 415,000 | 66 | | | |
| | 1929 | 52 | 344,600 | 52 | 1 | 9,000 | 2 | | | | | | | | | |
| Washington, D. C | 1928 | 745 | 6,357,600 | 745 | 6 | 33,500 | 12 | | | | 25 | 4,862,000 | 993 | 3 | 2,800,000 | 376 |
| | 1929 | 863 | 6,463,050 | 863 | 4 | 20,000 | 8 | | | | 21 | 3,587,000 | 732 | 4 | 2,500,000 | 358 |
| Wilmington, Del | 1928 | 174 | 1,057,823 | 174 | | | | 1 | 6,500 | 1 | 1 | 25,000 | 9 | 1 | 28,000 | 6 |
| | 1929 | 162 | 1,035,335 | 162 | 2 | 16,000 | 4 | | | | 4 | 458,000 | 90 | | | |
| Worcester, Mass | 1928 | 175 | 1,016,175 | 175 | 22 | 193,500 | 44 | | | | 11 | 206,500 | 60 | | | |
| | 1929 | 145 | 928,800 | 145 | 11 | 94,000 | 22 | | | | 7 | 70,300 | 22 | | | |
| Yonkers, N. Y | 1928 | 344 | 3,809,200 | 344 | 73 | 834,000 | 146 | | | | 74 | 14,174,000 | 2,259 | 2 | 214,000 | 48 |
| | 1929 | 273 | 3,256,800 | 273 | 22 | 230,000 | 44 | | | | 36 | 4,936,000 | 1,052 | 5 | 595,000 | 78 |
| Youngstown, Ohio | 1928 | 449 | 2,604,035 | 449 | 11 | 102,000 | 22 | 17 | 177,200 | 25 | 1 | 125,000 | 28 | | | |
| | 1929 | 255 | 1,325,525 | 255 | 21 | 164,200 | 42 | 6 | 42,250 | 6 | | | | | | |
| Total (85 cities) | 1928 | 59,861 | 291,080,646 | 59,861 | 9,190 | 71,586,825 | 18,380 | 1,340 | 14,057,773 | 2,283 | 6,068 | 429,009,191 | 105,980 | 680 | 41,436,804 | 8,712 |
| | 1929 | 43,320 | 212,357,370 | 43,320 | 6,488 | 49,049,636 | 12,976 | 839 | 8,280,967 | 1,338 | 4,034 | 353,284,280 | 79,266 | 334 | 22,815,236 | 5,166 |

TABLE 7.—NUMBER AND ESTIMATED COST OF BUILDINGS (NEW CONSTRUCTION, AND REPAIRS, ALTERATIONS, AND ADDITIONS TO OLD BUILDINGS) COVERED BY PERMITS ISSUED IN THE FIRST HALF OF 1928 AND OF 1929, BY INTENDED USE OF BUILDINGS—Continued

PART 1.—NEW RESIDENTIAL BUILDINGS—Continued

| City and State | First half of each year | Total families provided for | Population of city | | Ratio of families provided for to each 10,000 of population based on— | | Nonhousekeeping dwellings | | | | | | Total new residential dwellings | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Census of 1920 | Census estimate for year specified | Census of 1920 | Census estimate for year 1928 | Hotels | | Lodging houses | | Other | | Number | Cost |
| | | | | | | | Number | Cost | Number | Cost | Number | Cost | | |
| Akron, Ohio | 1928 | 1,361 | 208,435 | (1) | 65.3 | | | | 1 | $5,000 | | | 1,218 | $6,469,338 |
| | 1929 | 1,541 | | | 73.9 | | | | | | | | 1,319 | 7,082,958 |
| Albany, N. Y | 1928 | 321 | 113,344 | 120,400 | 28.3 | 26.7 | | | | | 1 | $175,000 | 196 | 4,054,400 |
| | 1929 | 280 | | | 24.7 | 23.3 | | | | | | | 128 | 2,414,000 |
| Atlanta, Ga | 1928 | 1,480 | 200,616 | 255,100 | 73.8 | 58.0 | | | | | | | 942 | 4,736,549 |
| | 1929 | 907 | | | 45.2 | 35.6 | | | | | | | 564 | 3,003,015 |
| Baltimore, Md | 1928 | 1,983 | 733,826 | 830,400 | 27.0 | 23.9 | 2 | $2,450,000 | | | 1 | 16,000 | 1,717 | 10,430,000 |
| | 1929 | 1,781 | | | 24.3 | 21.4 | | | | | 1 | 15,000 | 1,659 | 7,457,500 |
| Birmingham, Ala | 1928 | 1,624 | 178,806 | 222,400 | 90.8 | 73.0 | 1 | 25,000 | | | | | 1,152 | 4,396,245 |
| | 1929 | 484 | | | 27.1 | 21.8 | | | | | 1 | 1,500 | 380 | 1,219,425 |
| Boston, Mass | 1928 | 3,682 | 748,060 | 799,200 | 49.2 | 46.1 | | | | | | | 1,226 | 14,360,100 |
| | 1929 | 2,661 | | | 35.6 | 33.3 | 1 | 500,000 | | | 4 | 3,710,735 | 676 | 15,495,985 |
| Bridgeport, Conn | 1928 | 242 | 143,535 | (1) | 16.9 | | | | | | 1 | 18,000 | 138 | 1,209,900 |
| | 1929 | 259 | | | 18.0 | | | | | | | | 164 | 1,112,560 |
| Buffalo, N. Y | 1928 | 1,580 | 506,775 | 555,800 | 31.2 | 28.4 | | | | | 1 | 60,000 | 796 | 4,943,475 |
| | 1929 | 921 | | | 31.2 | 16.6 | | | | | | | 461 | 3,072,520 |
| Cambridge, Mass | 1928 | 694 | 109,694 | 125,800 | 63.3 | 55.2 | | | | | | | 111 | 2,717,800 |
| | 1929 | 728 | | | 66.4 | 57.9 | | | | | | | 55 | 3,446,400 |
| Camden, N. J | 1928 | 201 | 116,309 | 135,400 | 17.3 | 14.8 | | | | | | | 196 | 702,250 |
| | 1929 | 172 | | | 14.8 | 12.7 | | | | | | | 156 | 565,600 |
| Canton, Ohio | 1928 | 243 | 87,091 | 116,800 | 27.9 | 20.8 | | | | | | | 215 | 1,468,550 |
| | 1929 | 202 | | | 23.2 | 17.3 | | | | | | | 192 | 1,049,300 |
| Chicago, Ill | 1928 | 19,885 | 2,701,705 | 3,155,600 | 73.6 | 63.0 | 23 | 10,486,000 | | | 35 | 3,259,600 | 4,212 | 120,551,950 |
| | 1929 | 13,215 | | | 48.9 | 41.9 | 21 | 2,506,000 | | | 1 | 16,000 | 2,744 | 60,643,600 |
| Cincinnati, Ohio | 1928 | 1,987 | 401,247 | 413,700 | 49.5 | 48.0 | | | | | 1 | 130,000 | 1,130 | 11,948,785 |
| | 1929 | 1,322 | | | 32.9 | 32.0 | | | | | | | 894 | 7,886,225 |
| Cleveland, Ohio | 1928 | 1,966 | 796,841 | 1,010,300 | 24.7 | 19.5 | 3 | 370,000 | | | | | 1,093 | 10,070,100 |
| | 1929 | 1,318 | | | 16.5 | 13.0 | | | | | 2 | 76,000 | 719 | 7,546,300 |
| Columbus, Ohio | 1928 | 1,647 | 237,031 | 299,000 | 69.5 | 55.1 | | | | | 1 | 10,000 | 1,133 | 7,594,800 |
| | 1929 | 880 | | | 37.1 | 29.4 | | | | | | | 610 | 4,305,500 |
| Dallas, Tex | 1928 | 665 | 158,976 | 217,800 | 41.8 | 30.5 | 1 | 12,000 | | | | | 510 | 1,853,695 |
| | 1929 | 786 | | | 49.4 | 36.1 | 2 | 210,000 | | | | | 454 | 1,983,125 |

| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1929 | 786 | | | 49.4 | 36.1 | 2 | 210,000 | | | | | | 454 | 1,983,125 |
| Dayton, Ohio | 1928 | 541 | 152,559 | 184,500 | 35.5 | 29.3 | 1 | 2,234,000 | | | 1 | 844,291 | | 248 | 4,962,203 |
| | 1929 | 136 | | | 8.9 | 7.4 | 1 | 452,000 | | | | | | 85 | 1,063,527 |
| Denver, Colo | 1928 | 1,170 | 256,491 | 294,200 | 45.6 | 39.8 | 1 | 50,000 | | | | | | 735 | 5,143,000 |
| | 1929 | 996 | | | 38.8 | 33.9 | | | | | 2 | 124,000 | | 510 | 3,910,000 |
| Des Moines, Iowa | 1928 | 220 | 126,468 | 151,900 | 17.4 | 14.5 | | | | | | | | 158 | 752,178 |
| | 1929 | 205 | | | 16.2 | 13.5 | | | | | | | | 186 | 970,675 |
| Detroit, Mich | 1928 | 9,257 | 903,678 | 1,378,900 | 93.2 | 67.1 | 2 | 149,000 | | | 1 | 50,000 | | 5,163 | 38,406,883 |
| | 1929 | 7,338 | | | 73.8 | 53.2 | 2 | 199,000 | | | 1 | 23,000 | | 4,706 | 31,163,139 |
| Duluth, Minn | 1928 | 103 | 98,917 | 116,800 | 10.4 | 8.8 | | | | | | | | 100 | 495,750 |
| | 1929 | 70 | | | 7.1 | 6.0 | | | | | | | | 66 | 493,095 |
| El Paso, Tex | 1928 | 110 | 77,560 | 117,800 | 14.2 | 9.3 | | | | | | | | 91 | 353,292 |
| | 1929 | 336 | | | 43.3 | 28.5 | | | | | | | | 223 | 896,869 |
| Fall River, Mass | 1928 | 61 | 120,485 | 134,300 | 5.1 | 4.5 | | | | | 1 | 75,216 | | 50 | 318,316 |
| | 1929 | 23 | | | 1.9 | 1.7 | | | | | | | | 20 | 91,050 |
| Flint, Mich | 1928 | 1,168 | 91,599 | 148,800 | 127.5 | 78.5 | | | | | | | | 1,010 | 4,686,280 |
| | 1929 | 1,127 | | | 123.0 | 75.7 | | | | | | | | 968 | 4,295,390 |
| Fort Wayne, Ind | 1928 | 212 | 86,549 | 105,300 | 24.5 | 20.1 | | | | | 1 | 121,940 | | 213 | 1,230,037 |
| | 1929 | 292 | | | 33.7 | 27.7 | | | | | | | | 260 | 1,420,213 |
| Fort Worth, Tex | 1928 | 1,471 | 106,482 | 170,600 | 138.1 | 86.2 | 2 | 2,300,000 | 4 | 41,200 | 1 | 8,500 | | 1,164 | 8,031,465 |
| | 1929 | 794 | | | 74.6 | 46.5 | | | | | | | | 684 | 3,046,471 |
| Grand Rapids, Mich | 1928 | 498 | 137,634 | 164,200 | 36.2 | 30.3 | | | | | | | | 480 | 1,999,895 |
| | 1929 | 371 | | | 27.0 | 22.6 | | | | | | | | 345 | 1,351,800 |
| Hartford, Conn | 1928 | 1,050 | 138,036 | 172,300 | 76.1 | 60.9 | | | | | | | | 157 | 3,305,517 |
| | 1929 | 194 | | | 14.1 | 11.3 | | | | | | | | 60 | 815,700 |
| Houston, Tex | 1928 | 2,608 | 138,276 | (1) | 188.6 | | 2 | 235,000 | 1 | 12,000 | | | | 1,953 | 10,589,780 |
| | 1929 | 2,022 | | | 146.1 | | | | 1 | 15,000 | | | | 1,570 | 8,431,284 |
| Indianapolis, Ind | 1928 | 1,414 | 314,194 | 382,100 | 45.0 | 37.0 | 3 | 900,000 | | | | | | 832 | 6,399,535 |
| | 1929 | 1,072 | | | 34.1 | 28.1 | | | | | | | | 746 | 4,166,725 |
| Jacksonville, Fla | 1928 | 1,002 | 91,558 | 140,700 | 109.4 | 71.2 | | | | | | | | 754 | 3,294,950 |
| | 1929 | 456 | | | 49.8 | 32.4 | | | | | | | | 360 | 1,213,975 |
| Jersey City, N. J | 1928 | 933 | 298,103 | 324,700 | 31.3 | 28.7 | | | 1 | 22,000 | | | | 102 | 3,696,500 |
| | 1929 | 1,230 | | | 41.3 | 37.9 | | | | | | | | 95 | 3,832,880 |
| Kansas City, Kans | 1928 | 165 | 101,177 | 118,300 | 16.3 | 13.9 | | | 1 | 7,000 | | | | 155 | 320,930 |
| | 1929 | 132 | | | 13.0 | 11.2 | | | | | | | | 132 | 301,250 |
| Kansas City, Mo | 1928 | 1,185 | 324,410 | 391,000 | 36.5 | 30.3 | | | | | | | | 553 | 4,561,200 |
| | 1929 | 1,429 | | | 44.0 | 36.5 | | | 1 | 20,000 | | | | 516 | 4,361,800 |
| Knoxville, Tenn | 1928 | 422 | 77,818 | 105,400 | 54.2 | 40.0 | 1 | 210,000 | | | 23 | 510,000 | | 426 | 2,093,724 |
| | 1929 | 323 | | | 41.5 | 30.6 | | | | | 1 | 298,200 | | 311 | 1,687,399 |
| Long Beach, Calif | 1928 | 1,661 | 55,593 | 110,700 | 298.8 | 150.0 | 2 | 90,000 | | | | | | 862 | 4,724,710 |
| | 1929 | 1,885 | | | 339.1 | 170.3 | 4 | 335,000 | | | | | | 988 | 5,308,130 |
| Los Angeles, Calif | 1928 | 11,730 | 576,673 | (1) | 203.4 | | 12 | 846,200 | | | | | | 4,795 | 33,961,108 |
| | 1929 | 9,179 | | | 159.2 | | 18 | 1,150,600 | | | | | | 4,066 | 28,369,961 |
| Louisville, Ky | 1928 | 823 | 234,891 | 329,400 | 35.0 | 25.0 | | | | | | | | 599 | 4,992,950 |
| | 1929 | 950 | | | 38.3 | 27.3 | | | | | | | | 506 | 3,112,450 |
| Lowell, Mass | 1928 | 23 | 112,750 | [2] 110,296 | 2.0 | 2.1 | | | | | | | | 22 | 79,350 |
| | 1929 | 21 | | | 1.9 | 1.9 | | | | | | | | 20 | 82,625 |
| Lynn, Mass | 1928 | 271 | 99,148 | 105,500 | 27.3 | 25.7 | | | | | | | | 104 | 1,013,200 |
| | 1929 | 317 | | | 32.0 | 30.0 | | | | | | | | 84 | 1,122,600 |
| Memphis, Tenn | 1928 | 965 | 162,351 | 190,200 | 59.4 | 50.7 | | | | | | | | 569 | 3,456,350 |
| | 1929 | 751 | | | 46.3 | 39.5 | | | | | | | | 474 | 2,539,600 |

[1] Not estimated by Census Bureau.

[2] State census Jan. 1, 1925.

70975°—29——10 [909]

TABLE 7.—NUMBER AND ESTIMATED COST OF BUILDINGS (NEW CONSTRUCTION, AND REPAIRS, ALTERATIONS, AND ADDITIONS TO OLD BUILDINGS) COVERED BY PERMITS ISSUED IN THE FIRST HALF OF 1928 AND OF 1929, BY INTENDED USE OF BUILDINGS—Continued

PART 1.—NEW RESIDENTIAL BUILDINGS—Continued

| City and State | First half of each year | Total families provided for | Population of city | | Ratio of families provided for to each 10,000 of population based on— | | Nonhousekeeping dwellings | | | | | | Total new residential dwellings | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Census of 1920 | Census estimate for year specified | Census of 1920 | Census estimate for year 1928 | Hotels | | Lodging houses | | Other | | Number | Cost |
| | | | | | | | Number | Cost | Number | Cost | Number | Cost | | |
| Miami, Fla | 1928 | 88 | 29,571 | 156,700 | 29.8 | 5.6 | 1 | $25,000 | | | | | 87 | $443,175 |
| | 1929 | 70 | | | 23.7 | 4.5 | | | | | | | 66 | 409,570 |
| Milwaukee, Wis | 1928 | 2,263 | 457,147 | 544,200 | 49.5 | 41.6 | 1 | 170,000 | 1 | $65,000 | | | 906 | 9,000,707 |
| | 1929 | 2,398 | | | 52.5 | 44.1 | | | | | 2 | $64,500 | 918 | 9,058,777 |
| Minneapolis, Minn | 1928 | 1,260 | 380,582 | 455,900 | 33.1 | 27.6 | 3 | 355,000 | | | 4 | 138,000 | 769 | 4,974,780 |
| | 1929 | 1,006 | | | 26.4 | 22.1 | 1 | 521,200 | | | 2 | 107,000 | 534 | 4,585,895 |
| Nashville, Tenn | 1928 | 445 | 118,342 | 139,600 | 37.6 | 31.9 | | | | | | | 329 | 1,285,805 |
| | 1929 | 564 | | | 47.7 | 40.4 | 1 | 550,000 | | | | | 276 | 2,215,047 |
| Newark, N. J | 1928 | 2,076 | 414,524 | 473,600 | 50.1 | 43.8 | 1 | 150,000 | | | 1 | 65,000 | 322 | 11,102,573 |
| | 1929 | 407 | | | 9.8 | 8.6 | | | | | 1 | 15,000 | 191 | 2,224,680 |
| New Bedford, Mass | 1928 | 25 | 121,217 | [1] 119,539 | 2.1 | 2.1 | | | | | | | 22 | 188,300 |
| | 1929 | 14 | | | 1.2 | 1.2 | | | | | | | 14 | 95,400 |
| New Haven, Conn | 1928 | 316 | 162,537 | 187,900 | 19.4 | 16.8 | | | | | 3 | 152,000 | 92 | 1,398,500 |
| | 1929 | 191 | | | 11.8 | 10.2 | | | | | 3 | 760,000 | 98 | 1,650,900 |
| New Orleans, La | 1928 | 1,177 | 387,219 | 429,400 | 30.4 | 27.4 | | | | | | | 700 | 2,932,493 |
| | 1929 | 795 | | | 20.5 | 18.5 | | | | | | | 473 | 1,708,847 |
| New York, N. Y.: | | | | | | | | | | | | | | |
| The Bronx | 1928 | 23,237 | 5,620,048 | 6,017,500 | 121.0 | 113.0 | | | | | | | 1,757 | 100,987,185 |
| | 1929 | 12,342 | | | 85.7 | 80.0 | | | | | | | 849 | 54,475,150 |
| Brooklyn | 1928 | 16,986 | | | | | 3 | 2,407,000 | | | | | 3,595 | 75,496,500 |
| | 1929 | 9,148 | | | | | 7 | 26,350,000 | | | | | 1,600 | 69,136,450 |
| Manhattan | 1928 | 8,536 | | | | | 26 | 46,180,000 | | | 11 | 6,179,000 | 181 | 112,277,000 |
| | 1929 | 15,244 | | | | | 113 | 204,070,000 | | | 8 | 11,815,000 | 307 | 341,055,000 |
| Queens | 1928 | 18,016 | | | | | | | | | | | 6,763 | 75,081,870 |
| | 1929 | 10,670 | | | | | 1 | 1,500,000 | | | 4 | 270,000 | 3,145 | 46,641,335 |
| Richmond | 1928 | 1,247 | | | | | 2 | 160,000 | | | 1 | 5,900 | 750 | 5,286,064 |
| | 1929 | 747 | | | | | | | | | | | 583 | 3,318,140 |
| Norfolk, Va | 1928 | 485 | 115,777 | 184,200 | 41.9 | 26.3 | 1 | 158,000 | | | | | 183 | 1,628,900 |
| | 1929 | 160 | | | 13.8 | 8.7 | | | | | | | 139 | 777,975 |
| Oakland, Calif | 1928 | 1,224 | 216,261 | 274,100 | 56.6 | 44.7 | 1 | 175,000 | | | 2 | 500,000 | 611 | 4,511,883 |
| | 1929 | 1,008 | | | 46.6 | 36.8 | 1 | 46,489 | | | | | 431 | 3,293,950 |

| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Oklahoma City, Okla | 1928 | 1,438 | 91,295 | (1) | 157.5 | | 1 | 20,000 | | | | | 1,199 | 4,398,440 |
| | 1929 | 1,778 | | | 194.8 | | | | 1 | 25,000 | | | 1,147 | 5,758,595 |
| Omaha, Nebr | 1928 | 201 | 191,601 | 222,800 | 10.5 | 9.0 | | | | | | | 175 | 1,120,300 |
| | 1929 | 258 | | | 13.5 | 11.6 | | | | | | | 183 | 1,171,950 |
| Paterson, N. J | 1928 | 337 | 135,875 | 144,900 | 24.8 | 23.3 | | | | | 1 | 6,000 | 139 | 1,160,163 |
| | 1929 | 249 | | | 18.3 | 17.2 | | | | | | | 127 | 798,650 |
| Philadelphia, Pa | 1928 | 6,723 | 1,823,779 | 2,064,200 | 36.9 | 32.6 | | | | | 4 | 1,703,000 | 4,889 | 33,167,040 |
| | 1929 | 4,454 | | | 24.4 | 21.6 | | | 1 | 80,000 | 1 | 950,000 | 3,043 | 21,330,585 |
| Pittsburgh, Pa | 1928 | 1,078 | 588,343 | 673,800 | 18.3 | 16.0 | | | | | 2 | 297,000 | 958 | 6,549,686 |
| | 1929 | 1,250 | | | 21.2 | 18.6 | | | | | | | 735 | 6,239,850 |
| Portland, Oreg | 1928 | 1,329 | 258,288 | (1) | 51.5 | | 1 | 85,000 | | | 1 | 60,000 | 1,082 | 5,877,010 |
| | 1929 | 923 | | | 35.7 | | | | | | 1 | 24,000 | 638 | 4,098,750 |
| Providence, R. I | 1928 | 654 | 237,595 | 286,300 | 27.5 | 22.8 | | | | | 1 | 85,000 | 390 | 4,358,200 |
| | 1929 | 454 | | | 19.1 | 15.9 | | | | | | | 262 | 2,910,700 |
| Reading, Pa | 1928 | 142 | 107,784 | 115,400 | 13.2 | 12.3 | | | | | | | 142 | 814,050 |
| | 1929 | 152 | | | 14.1 | 13.2 | 1 | 791,000 | | | 1 | 80,452 | 138 | 1,774,527 |
| Richmond, Va | 1928 | 470 | 171,567 | 194,400 | 27.4 | 24.2 | | | | | 1 | 75,000 | 371 | 2,347,131 |
| | 1929 | 469 | | | 27.3 | 24.1 | | | | | 1 | 100,000 | 314 | 2,069,685 |
| Rochester, N. Y | 1928 | 1,151 | 295,750 | 328,200 | 38.9 | 35.1 | | | | | 1 | 150,000 | 516 | 4,741,704 |
| | 1929 | 315 | | | 10.7 | 9.6 | | | | | 4 | 1,458,000 | 272 | 3,105,738 |
| St. Louis, Mo | 1928 | 4,095 | 772,897 | 848,100 | 53.0 | 48.3 | 8 | 2,567,000 | | | 2 | 241,000 | 1,667 | 13,826,350 |
| | 1929 | 3,049 | | | 39.4 | 36.0 | 1 | 1,500,000 | | | 1 | 55,000 | 1,130 | 9,904,150 |
| St. Paul, Minn | 1928 | 374 | 234,698 | (1) | 15.9 | | | | | | | | 324 | 2,123,466 |
| | 1929 | 285 | | | 12.2 | | | | | | | | 245 | 1,357,596 |
| Salt Lake City, Utah | 1928 | 467 | 118,110 | 138,000 | 39.5 | 33.8 | | | | | | | 278 | 1,393,310 |
| | 1929 | 435 | | | 36.8 | 31.8 | 1 | 324,000 | | | | | 265 | 1,916,980 |
| San Antonio, Tex | 1928 | 1,728 | 161,379 | 218,100 | 107.1 | 79.2 | | | | | | | 1,214 | 5,162,943 |
| | 1929 | 1,137 | | | 70.5 | 52.1 | 1 | 675,000 | 4 | 15,525 | | | 958 | 3,954,280 |
| San Diego, Calif | 1928 | 1,173 | 74,683 | 119,700 | 157.1 | 98.0 | 2 | 153,000 | | | | | 878 | 4,155,411 |
| | 1929 | 761 | | | 101.9 | 63.6 | 1 | 109,400 | | | | | 632 | 2,810,737 |
| San Francisco, Calif | 1928 | 3,613 | 508,676 | 585,300 | 71.0 | 61.7 | 3 | 336,800 | | | | | 1,540 | 12,064,604 |
| | 1929 | 2,095 | | | 41.2 | 35.8 | 2 | 906,000 | | | 4 | 27,326 | 890 | 8,851,010 |
| Scranton, Pa | 1928 | 129 | 137,783 | 144,700 | 9.4 | 8.9 | | | | | | | 88 | 698,060 |
| | 1929 | 89 | | | 6.5 | 6.2 | | | | | | | 69 | 382,265 |
| Seattle, Wash | 1928 | 3,319 | 315,312 | 383,200 | 105.3 | 86.6 | 1 | 428,000 | | | 4 | 134,000 | 1,516 | 11,217,525 |
| | 1929 | 2,072 | | | 65.7 | 54.1 | | | | | 3 | 180,000 | 1,083 | 7,543,120 |
| Somerville, Mass | 1928 | 55 | 93,091 | 102,700 | 5.9 | 5.4 | | | | | | | 12 | 216,000 |
| | 1929 | 225 | | | 24.2 | 21.9 | | | | | | | 41 | 767,500 |
| Spokane, Wash | 1928 | 281 | 104,437 | 109,100 | 26.9 | 25.8 | | | | | | | 276 | 1,062,350 |
| | 1929 | 276 | | | 26.4 | 25.3 | | | | | | | 212 | 993,350 |
| Springfield, Mass | 1928 | 424 | 129,614 | 149,800 | 32.7 | 28.3 | 1 | 500,000 | | | | | 284 | 2,325,450 |
| | 1929 | 319 | | | 24.6 | 21.3 | | | | | | | 190 | 1,323,250 |
| Syracuse, N. Y | 1928 | 945 | 171,717 | 199,300 | 55.0 | 47.4 | | | | | 1 | 55,000 | 504 | 4,598,200 |
| | 1929 | 453 | | | 26.4 | 22.7 | | | | | | | 386 | 2,562,400 |
| Tacoma, Wash | 1928 | 487 | 96,965 | 110,500 | 50.2 | 44.1 | | | | | | | 339 | 1,473,550 |
| | 1929 | 297 | | | 30.6 | 26.9 | | | | | | | 195 | 844,500 |
| Tampa, Fla | 1928 | 404 | 51,608 | 113,400 | 78.3 | 35.6 | 1 | 100,000 | | | | | 399 | 1,098,980 |
| | 1929 | 133 | | | 25.8 | 11.7 | | | | | | | 133 | 258,845 |
| Toledo, Ohio | 1928 | 868 | 243,164 | 313,200 | 35.7 | 27.7 | | | | | | | 764 | 3,523,500 |
| | 1929 | 914 | | | 37.6 | 29.2 | | | | | | | 626 | 3,214,370 |

[1] Not estimated by Census Bureau.

TABLE 7.—NUMBER AND ESTIMATED COST OF BUILDINGS (NEW CONSTRUCTION, AND REPAIRS, ALTERATIONS, AND ADDITIONS TO OLD BUILDINGS) COVERED BY PERMITS ISSUED IN THE FIRST HALF OF 1928 AND OF 1929, BY INTENDED USE OF BUILDINGS—Continued

PART 1.—NEW RESIDENTIAL BUILDINGS—Continued

| City and State | First half of each year | Total families provided for | Population of city | | Ratio of families provided for to each 10,000 of population based on— | | Nonhousekeeping dwellings | | | | | | Total new residential dwellings | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Census of 1920 | Census estimate for year specified | Census of 1920 | Census estimate for year 1928 | Hotels | | Lodging houses | | Other | | Number | Cost |
| | | | | | | | Number | Cost | Number | Cost | Number | Cost | | |
| Trenton, N. J. | 1928 | 136 | 119,289 | 139,000 | 11.4 | 9.8 | | | | | | | 107 | $597,200 |
| | 1929 | 46 | | | 3.9 | 3.3 | | | | | | | 46 | 376,864 |
| Tulsa, Okla. | 1928 | 1,079 | 72,075 | 170,500 | 149.7 | 63.3 | 3 | $890,000 | | | | | 717 | 4,744,305 |
| | 1929 | 1,098 | | | 152.3 | 64.4 | | | | | | | 618 | 3,434,472 |
| Utica, N. Y. | 1928 | 195 | 94,156 | 104,200 | 20.7 | 18.7 | | | | | 1 | $250,000 | 124 | 1,501,150 |
| | 1929 | 54 | | | 5.7 | 5.2 | | | | | | | 53 | 353,600 |
| Washington, D. C. | 1928 | 2,126 | 437,571 | 552,000 | 48.6 | 38.5 | 1 | 1,500,000 | | | | | 780 | 15,553,100 |
| | 1929 | 1,961 | | | 44.8 | 35.5 | 1 | 650,000 | | | | | 893 | 13,220,050 |
| Wilmington, Del. | 1928 | 190 | 110,168 | 128,500 | 17.2 | 14.8 | | | | | | | 177 | 1,117,323 |
| | 1929 | 256 | | | 23.2 | 19.9 | | | | | | | 168 | 1,509,335 |
| Worcester, Mass. | 1928 | 279 | 179,754 | 197,600 | 15.5 | 14.1 | | | | | 2 | 389,000 | 210 | 1,805,175 |
| | 1929 | 189 | | | 10.5 | 9.6 | | | | | 1 | 1,000 | 164 | 1,094,100 |
| Yonkers, N. Y. | 1928 | 2,797 | 100,176 | 121,300 | 279.2 | 230.6 | | | | | | | 493 | 19,031,200 |
| | 1929 | 1,447 | | | 144.4 | 119.3 | | | | | 5 | 885,000 | 341 | 9,902,800 |
| Youngstown, Ohio | 1928 | 524 | 132,358 | 174,200 | 39.6 | 30.1 | | | | | | | 478 | 3,008,235 |
| | 1929 | 303 | | | 22.9 | 17.4 | | | | | | | 282 | 1,531,975 |
| Total (85 cities) | 1928 | 195,216 | 28,800,483 | [1] 33,570,795 | 67.8 | 58.2 | 117 | 76,717,000 | 9 | $152,200 | 112 | 15,763,447 | 77,377 | 939,803,886 |
| | 1929 | 142,066 | | | 49.3 | 42.3 | 181 | 243,345,689 | 8 | 155,525 | 55 | 21,056,713 | 55,259 | 910,345,416 |

[1] See notes to details.

## PART 2.—NEW NONRESIDENTIAL BUILDINGS

| City and State | First half of each year | Amusement and recreation places | | Churches | | Factories, shops, etc. | | Garages (public) | | Garages (private) | | Gasoline and service stations | | Institutions | | Office buildings | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Number | Cost | Number | Cost | Number | Cost | Number | Cost | Number | Cost | Number | Cost | Number | Cost | Number | Cost |
| Akron, Ohio | 1928 | 3 | $80,500 | 2 | $64,000 | 21 | $84,075 | 7 | $251,600 | 998 | $218,857 | 18 | $68,822 | | | | |
| | 1929 | 1 | 35,000 | | | 12 | 451,000 | 5 | 78,700 | 1,271 | 283,500 | 17 | 25,396 | | | | |
| Albany, N. Y. | 1928 | | | 1 | 80,000 | 1 | 26,000 | 7 | 381,100 | 172 | 171,690 | 2 | 7,000 | 1 | $1,250,000 | 1 | $800,000 |
| | 1929 | | | 3 | 500,000 | 1 | 16,000 | 1 | 100,000 | 103 | 90,472 | 3 | 41,000 | | | 5 | 2,086,000 |
| Atlanta, Ga. | 1928 | 1 | 1,850,000 | 8 | 74,200 | 1 | 8,000 | 5 | 221,000 | 144 | 18,395 | 10 | 36,000 | 1 | 100,000 | | |
| | 1929 | 3 | 23,000 | 9 | 511,200 | 2 | 16,500 | 5 | 161,900 | 126 | 14,819 | 12 | 49,550 | | | 1 | 125,000 |
| Baltimore, Md. | 1928 | 1 | 35,000 | 5 | 355,000 | 16 | 319,000 | 15 | 106,000 | 1,309 | 682,600 | 18 | 182,500 | 1 | 325,000 | 3 | 402,000 |
| | 1929 | 1 | 40,000 | 4 | 127,000 | 12 | 2,028,000 | 4 | 31,000 | 988 | 649,900 | 14 | 84,000 | 2 | 315,000 | 2 | 78,000 |
| Birmingham, Ala. | 1928 | 6 | 260,963 | 10 | 151,916 | 19 | 374,500 | 7 | 132,930 | 221 | 39,005 | 10 | 36,300 | 2 | 218,500 | 11 | 682,884 |
| | 1929 | 3 | 86,685 | 12 | 416,678 | 6 | 73,000 | 5 | 73,000 | 157 | 21,525 | 14 | 84,080 | | | 2 | 294,136 |
| Boston, Mass. | 1928 | 4 | 400,000 | 4 | 176,000 | 11 | 865,000 | 2 | 384,000 | 502 | 418,550 | 15 | 217,000 | 4 | 561,000 | 3 | 533,000 |
| | 1929 | 2 | 315,000 | 5 | 398,000 | 8 | 111,200 | 2 | 75,000 | 477 | 355,227 | 14 | 30,125 | 3 | 1,325,000 | 7 | 1,877,000 |
| Bridgeport, Conn. | 1928 | 1 | 4,000 | | | | | | | 204 | 120,619 | 13 | 82,400 | | | | |
| | 1929 | | | 2 | 86,000 | 1 | 8,000 | 21 | 40,800 | 179 | 78,795 | | | 1 | 12,000 | 3 | 754,650 |
| Buffalo, N. Y. | 1928 | 3 | 448,000 | 3 | 48,000 | 28 | 548,800 | 103 | 138,505 | 213 | 432,200 | | | 2 | 250,000 | 5 | 2,013,500 |
| | 1929 | | | | | 33 | 1,183,600 | 138 | 142,390 | 770 | 212,390 | | | | | | |
| Cambridge, Mass. | 1928 | | | 2 | 56,800 | 6 | 112,000 | 1 | 15,900 | 90 | 61,940 | 3 | 7,100 | 2 | 1,035,000 | 4 | 22,100 |
| | 1929 | 2 | 1,235,000 | 1 | 8,000 | 18 | 381,100 | | | 69 | 42,255 | 1 | 3,000 | | | 1 | 50,000 |
| Camden, N. J. | 1928 | | | | | 20 | 608,900 | 2 | 6,000 | 137 | 50,015 | 5 | 37,295 | | | 5 | 710,325 |
| | 1929 | | | 1 | 50,000 | 8 | 126,350 | 1 | 10,000 | 112 | 47,270 | 3 | 1,900 | | | 3 | 119,045 |
| Canton, Ohio | 1928 | 1 | 100,000 | 2 | 158,500 | 4 | 101,600 | 5 | 8,600 | 265 | 57,292 | 11 | 24,850 | 1 | 18,000 | | |
| | 1929 | | | | | 7 | 56,000 | 12 | 74,600 | 294 | 56,720 | 8 | 38,000 | 1 | 225,000 | 2 | 40,000 |
| Chicago, Ill. | 1928 | 3 | 4,370,000 | 24 | 3,318,000 | 109 | 10,636,200 | 66 | 1,987,500 | 2,657 | 956,500 | 142 | 726,300 | 5 | 3,000,000 | 39 | 14,066,800 |
| | 1929 | 8 | 2,819,500 | 17 | 1,661,500 | 91 | 4,726,500 | 59 | 1,454,200 | 1,969 | 735,000 | 56 | 392,200 | 3 | 947,000 | 43 | 12,434,900 |
| Cincinnati, Ohio | 1928 | 4 | 102,000 | 1 | 225,000 | 2 | 80,000 | 5 | 492,800 | 773 | 352,605 | 10 | 33,700 | 1 | 600,000 | | |
| | 1929 | | | | | 18 | 1,810,500 | 1 | 65,000 | 594 | 253,935 | 3 | 13,500 | 2 | 445,000 | 1 | 60,000 |
| Cleveland, Ohio | 1928 | 2 | 91,500 | 4 | 190,500 | 27 | 532,600 | 5 | 53,800 | 1,868 | 479,100 | 50 | 72,350 | 2 | 875,000 | 16 | 376,100 |
| | 1929 | 2 | 82,500 | 2 | 225,000 | 29 | 533,500 | 9 | 473,000 | 1,703 | 490,550 | 37 | 114,650 | | | 14 | 756,000 |
| Columbus, Ohio | 1928 | 4 | 167,000 | | | 7 | 154,000 | 1 | 12,000 | 1,331 | 396,150 | 11 | 48,700 | | | 4 | 201,000 |
| | 1929 | | | 1 | 5,000 | 5 | 142,700 | 4 | 58,000 | 810 | 252,350 | 13 | 72,150 | | | | |
| Dallas, Tex. | 1928 | | | 7 | 162,900 | 13 | 124,166 | 13 | 107,750 | 102 | 22,724 | 11 | 26,150 | 2 | 40,200 | 16 | 92,865 |
| | 1929 | 2 | 16,000 | 7 | 14,150 | 5 | 14,800 | 4 | 60,500 | 95 | 23,384 | 24 | 166,850 | 1 | 8,000 | | |
| Dayton, Ohio | 1928 | | | 3 | 39,000 | 34 | 409,633 | 13 | 435,463 | 515 | 267,383 | 4 | 20,000 | | | | |
| | 1929 | | | | | 20 | 1,270,882 | 5 | 118,645 | 420 | 216,382 | 5 | 55,500 | | | | |
| Denver, Colo. | 1928 | | | 4 | 93,000 | 5 | 57,000 | 6 | 145,000 | 592 | 202,000 | 23 | 46,250 | | | 1 | 390,000 |
| | 1929 | | | 1 | 3,000 | 14 | 947,500 | 4 | 440,000 | 267 | 128,950 | 7 | 13,500 | 1 | 170,000 | 2 | 79,000 |

TABLE 7.—NUMBER AND ESTIMATED COST OF BUILDINGS (NEW CONSTRUCTION, AND REPAIRS, ALTERATIONS, AND ADDITIONS TO OLD BUILDINGS) COVERED BY PERMITS ISSUED IN THE FIRST HALF OF 1928 AND OF 1929, BY INTENDED USE OF BUILDINGS—Continued

PART 2.—NEW NONRESIDENTIAL BUILDINGS—Continued

| City and State | First half of each year | Amusement and recreation places | | Churches | | Factories, shops, etc. | | Garages (public) | | Garages (private) | | Gasoline and service stations | | Institutions | | Office buildings | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Number | Cost | Number | Cost | Number | Cost | Number | Cost | Number | Cost | Number | Cost | Number | Cost | Number | Cost |
| Des Moines, Iowa | 1928 | 3 | $10,650 | 1 | $40,000 | 2 | $54,251 | 5 | $35,275 | 234 | $37,679 | 21 | $49,050 | 2 | $21,000 | | |
| | 1929 | 1 | 700 | 3 | 12,500 | 2 | 3,000 | 2 | 44,200 | 160 | 27,178 | 7 | 26,850 | | | | |
| Detroit, Mich | 1928 | 3 | 752,000 | 9 | 719,600 | 84 | 3,395,220 | 33 | 1,503,790 | 5,406 | 1,413,308 | 63 | 206,320 | | | 21 | $2,853,164 |
| | 1929 | 4 | 293,000 | 10 | 604,400 | 99 | 6,557,194 | 50 | 774,600 | 5,279 | 1,312,521 | 34 | 129,600 | 1 | 75,000 | 12 | 2,709,084 |
| Duluth, Minn | 1928 | | | | | | | 1 | 13,000 | 156 | 34,814 | 2 | 500 | | | | |
| | 1929 | 1 | 40,000 | | | 1 | 16,000 | | | 167 | 48,410 | 7 | 4,800 | | | | |
| El Paso, Tex | 1928 | 1 | 1,500 | 2 | 16,750 | | | 3 | 14,100 | 120 | 18,540 | 3 | 5,900 | | | 2 | 22,950 |
| | 1929 | 1 | 500 | 2 | 3,800 | 6 | 71,550 | 5 | 25,525 | 66 | 18,848 | 8 | 16,300 | 2 | 3,300 | | |
| Fall River, Mass | 1928 | 2 | 3,150 | 1 | 200,000 | 4 | 3,890 | 9 | 15,900 | 62 | 20,290 | 6 | 27,950 | | | 1 | 75,000 |
| | 1929 | | | | | 5 | 14,550 | 9 | 8,475 | 63 | 17,870 | 3 | 14,500 | | | | |
| Flint, Mich | 1928 | | | 4 | 45,945 | 16 | 163,425 | 11 | 94,000 | 741 | 238,591 | 24 | 91,150 | | | 3 | 203,700 |
| | 1929 | 1 | 59,700 | 2 | 11,100 | 16 | 172,710 | 2 | 4,300 | 788 | 260,367 | 18 | 92,475 | 1 | 68,000 | 3 | 28,065 |
| Fort Wayne, Ind | 1928 | | | 2 | 14,000 | 4 | 7,850 | 5 | 49,400 | 374 | 104,973 | 6 | 26,233 | | | | |
| | 1929 | 1 | 1,000 | 1 | 5,000 | 2 | 67,000 | 2 | 19,886 | 394 | 121,639 | 9 | 50,800 | | | 4 | 130,302 |
| Fort Worth, Tex | 1928 | 10 | 66,500 | 22 | 42,269 | 6 | 75,832 | 39 | 236,108 | 239 | 24,483 | 8 | 28,500 | | | | |
| | 1929 | 5 | 382,543 | 3 | 32,000 | 8 | 256,100 | 20 | 100,025 | 92 | 28,365 | 27 | 154,225 | | | 4 | 317,244 |
| Grand Rapids, Mich | 1928 | | | 1 | 42,000 | 7 | 316,000 | 12 | 159,400 | 705 | 168,625 | 10 | 34,900 | | | 3 | 13,500 |
| | 1929 | 2 | 28,000 | 2 | 60,000 | 4 | 36,500 | 19 | 198,850 | 647 | 150,840 | 9 | 24,400 | 3 | 34,620 | 3 | 106,050 |
| Hartford, Conn | 1928 | 1 | 6,500 | | | 3 | 11,000 | 4 | 20,700 | 231 | 204,555 | 9 | 23,700 | 2 | 110,400 | 4 | 367,900 |
| | 1929 | 1 | 3,000 | 1 | 17,099 | 5 | 89,985 | 1 | 200,000 | 127 | 114,773 | 4 | 98,780 | | | 4 | 6,735,000 |
| Houston, Tex | 1928 | 2 | 217,000 | 18 | 456,650 | 25 | 748,736 | 14 | 385,200 | 103 | 58,629 | 26 | 83,729 | 1 | 60,000 | 9 | 3,657,845 |
| | 1929 | 1 | 20,000 | 13 | 829,200 | 14 | 344,200 | 25 | 74,600 | 59 | 30,050 | 24 | 109,490 | | | 6 | 317,350 |
| Indianapolis, Ind | 1928 | | | 6 | 599,500 | 11 | 771,700 | 9 | 47,200 | 1,378 | 361,743 | 79 | 44,575 | | | 5 | 116,600 |
| | 1929 | | | 3 | 145,000 | 15 | 466,000 | 7 | 198,737 | 608 | 350,728 | 18 | 72,800 | 1 | 145,000 | 4 | 502,250 |
| Jacksonville, Fla | 1928 | 1 | 14,000 | 8 | 321,500 | 3 | 51,000 | 5 | 19,100 | 171 | 41,580 | 19 | 60,650 | | | | |
| | 1929 | 3 | 82,000 | 1 | 2,000 | 2 | 74,000 | 2 | 4,500 | 119 | 18,500 | 9 | 124,550 | | | | |
| Jersey City, N. J | 1928 | | | | | 9 | 370,200 | 15 | 111,980 | 135 | 117,598 | 2 | 7,000 | | | 10 | 628,200 |
| | 1929 | | | 3 | 596,000 | 9 | 65,600 | 3 | 590,000 | 182 | 156,025 | 8 | 4,350 | 1 | 90,000 | 3 | 15,900 |
| Kansas City, Kans | 1928 | | | 2 | 2,700 | 3 | 364,000 | | | 134 | 17,160 | 3 | 2,700 | | | 2 | 77,500 |
| | 1929 | | | 1 | 1,800 | 12 | 345,300 | 1 | 3,500 | 107 | 13,275 | 1 | 1,500 | | | 1 | 100,000 |
| Kansas City, Mo | 1928 | 2 | 170,000 | 3 | 118,000 | 9 | 153,000 | 8 | 235,000 | 192 | 62,675 | 20 | 111,250 | 2 | 475,000 | 4 | 1,527,000 |
| | 1929 | | | 3 | 136,000 | 5 | 42,000 | 3 | 120,000 | 159 | 67,450 | 15 | 71,000 | | | | |
| Knoxville, Tenn | 1928 | 4 | 39,840 | 4 | 72,600 | 8 | 64,600 | 8 | 44,640 | 92 | 14,538 | 22 | 55,625 | | | 8 | 465,600 |
| | 1929 | 1 | 4,920 | 3 | 11,040 | 13 | 310,347 | 9 | 404,400 | 115 | 23,010 | 24 | 15,097 | 1 | 208,800 | 3 | 161,348 |
| Long Beach, Calif | 1928 | 4 | 64,000 | 1 | 1,500 | 8 | 23,300 | 18 | 105,450 | 692 | 257,110 | 19 | 24,690 | 1 | 25,000 | | |
| | 1929 | 7 | 42,200 | 3 | 68,000 | 3 | 409,300 | 8 | 78,200 | 737 | 272,085 | 11 | 14,450 | 1 | 175,000 | 2 | 1,160,000 |

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Los Angeles, Calif. | 1928 | 20 | 293,178 | 24 | 1,285,200 | 133 | 777,619 | 48 | 265,050 | 4,458 | 1,363,671 | 242 | 198,952 | 9 | 742,677 | 42 | 1,783,050 |
| | 1929 | 29 | 3,297,635 | 15 | 265,664 | 179 | 2,209,531 | 39 | 220,353 | 3,884 | 1,135,924 | 108 | 98,310 | 7 | 1,822,000 | 26 | 763,750 |
| Louisville, Ky. | 1928 | | | 5 | 208,500 | 7 | 615,000 | 4 | 58,250 | 349 | 104,750 | 3 | 12,800 | | | 2 | 900,000 |
| | 1929 | 1 | 6,000 | 2 | 105,000 | 6 | 428,000 | 2 | 10,500 | 285 | 109,115 | 5 | 21,800 | | | | |
| Lowell, Mass. | 1928 | 1 | 135,000 | | | | | | | 59 | 14,090 | 1 | 3,000 | | | | |
| | 1929 | | | 2 | 34,500 | | | | | 77 | 20,365 | 2 | 1,000 | | | | |
| Lynn, Mass. | 1928 | 1 | 200 | 1 | 200 | 3 | 245,100 | 6 | 12,000 | 172 | 55,120 | 3 | 2,000 | | | | |
| | 1929 | | | | | 2 | 9,250 | 6 | 125,100 | 167 | 50,498 | 2 | 16,500 | | | | |
| Memphis, Tenn. | 1928 | 3 | 788,600 | | | 4 | 83,200 | 3 | 80,600 | 524 | 152,005 | 12 | 65,650 | 2 | 143,000 | | |
| | 1929 | 3 | 53,300 | | | 6 | 430,300 | | | 402 | 95,733 | 3 | 27,300 | | | | |
| Miami, Fla. | 1928 | 14 | 70,525 | 6 | 40,300 | 3 | 4,000 | 10 | 51,450 | 118 | 25,016 | 15 | 35,350 | | | 3 | 41,701 |
| | 1929 | 5 | 152,500 | 6 | 32,000 | 7 | 58,500 | 2 | 8,350 | 95 | 22,723 | 7 | 117,600 | | | | |
| Milwaukee, Wis. | 1928 | | | 1 | 25,700 | 22 | 584,700 | 10 | 229,500 | 1,353 | 500,273 | 16 | 41,300 | | | 10 | 67,000 |
| | 1929 | 2 | 29,100 | 1 | 100,000 | 19 | 1,072,250 | 6 | 253,500 | 1,304 | 470,428 | 13 | 31,800 | 1 | 70,000 | 12 | 785,750 |
| Minneapolis, Minn. | 1928 | | | 2 | 112,300 | 11 | 206,225 | 19 | 122,775 | 1,122 | 269,965 | 19 | 41,000 | | | 8 | 702,950 |
| | 1929 | | | 4 | 111,260 | 19 | 388,670 | 13 | 52,365 | 941 | 246,900 | 22 | 85,250 | 1 | 750,000 | 12 | 4,948,050 |
| Nashville, Tenn. | 1928 | | | 4 | 340,000 | 3 | 154,500 | 7 | 119,300 | 52 | 6,270 | 9 | 28,500 | | | | |
| | 1929 | 1 | 3,000 | 4 | 153,000 | 13 | 134,650 | 7 | 82,050 | 51 | 5,580 | 1 | 25,000 | | | | |
| Newark, N. J. | 1928 | 5 | 13,500 | | | 20 | 973,362 | 5 | 177,000 | 500 | 503,602 | 10 | 66,300 | 1 | 150,000 | 16 | 615,644 |
| | 1929 | 4 | 388,000 | 1 | 95,000 | 35 | 647,846 | 6 | 164,000 | 395 | 412,035 | 15 | 418,000 | 1 | 3,000 | 19 | 3,975,700 |
| New Bedford, Mass. | 1928 | | | | | 3 | 14,000 | 5 | 16,500 | 63 | 37,490 | 5 | 13,000 | | | | |
| | 1929 | | | | | 5 | 28,500 | 2 | 10,000 | 63 | 38,765 | 3 | 22,300 | | | | |
| New Haven, Conn. | 1928 | 2 | 55,000 | | | 8 | 625,000 | 5 | 98,000 | 158 | 101,000 | 9 | 36,500 | 1 | 90,000 | 1 | 65,000 |
| | 1929 | 1 | 24,000 | | | 10 | 108,000 | 2 | 86,000 | 155 | 92,700 | 4 | 25,000 | 1 | 380,000 | | |
| New Orleans, La. | 1928 | 1 | 18,139 | 2 | 313,059 | 5 | 4,335 | 10 | 15,000 | 48 | 9,295 | 17 | 19,000 | 1 | 173,855 | 1 | 6,500 |
| | 1929 | 2 | 43,650 | 3 | 444,000 | 1 | 43,779 | 27 | 73,000 | 41 | 22,075 | 25 | 125,723 | 1 | 30,000 | 2 | 203,000 |
| New York, N. Y.: | | | | | | | | | | | | | | | | | |
| The Bronx | 1928 | 200 | 3,187,504 | 7 | 925,000 | 58 | 1,875,250 | 272 | 4,036,200 | 516 | 120,135 | 12 | 49,200 | 2 | 558,000 | 10 | 1,499,850 |
| | 1929 | 26 | 3,821,800 | 4 | 290,000 | 53 | 1,977,250 | 250 | 1,337,000 | 562 | 178,850 | 20 | 126,300 | | | 20 | 1,382,700 |
| Brooklyn | 1928 | 18 | 3,942,000 | 17 | 1,620,000 | 62 | 4,260,000 | 75 | 2,996,500 | 2,305 | 1,043,570 | 97 | 283,850 | | | 18 | 1,555,500 |
| | 1929 | 8 | 472,000 | 5 | 500,000 | 96 | 3,557,720 | 97 | 4,406,500 | 1,946 | 1,103,775 | 91 | 292,705 | | | 12 | 910,000 |
| Manhattan | 1928 | 16 | 4,325,000 | 1 | 90,000 | 22 | 14,388,000 | 21 | 1,887,725 | 311 | 51,480 | 13 | 41,300 | 4 | 4,100,000 | 35 | 52,370,800 |
| | 1929 | 5 | 1,769,700 | | | 19 | 12,987,000 | 24 | 4,070,000 | 190 | 44,200 | 10 | 28,200 | 4 | 2,495,000 | 42 | 44,135,000 |
| Queens | 1928 | 16 | 773,000 | 15 | 776,500 | 42 | 1,752,500 | 71 | 2,491,200 | 3,112 | 1,207,699 | 71 | 273,504 | 1 | 20,000 | 25 | 560,550 |
| | 1929 | 26 | 1,281,200 | 5 | 1,160,000 | 20 | 494,000 | 71 | 1,818,050 | 2,964 | 1,034,796 | 80 | 284,308 | 1 | 650,000 | 25 | 1,390,600 |
| Richmond | 1928 | 6 | 962,700 | 4 | 155,000 | 4 | 111,500 | 3 | 213,000 | 417 | 105,662 | 10 | 9,650 | 1 | 50,000 | 2 | 3,700 |
| | 1929 | 7 | 87,500 | 1 | 14,000 | 12 | 381,575 | 3 | 40,500 | 350 | 95,707 | 20 | 101,450 | | | | |
| Norfolk, Va. | 1928 | 2 | 11,700 | 1 | 35,000 | 5 | 36,900 | 1 | 15,300 | 226 | 62,868 | 10 | 16,985 | 1 | 28,000 | | |
| | 1929 | | | 1 | 100,000 | | | 2 | 30,000 | 214 | 36,575 | 7 | 19,228 | 1 | 12,100 | | |
| Oakland, Calif. | 1928 | 9 | 287,749 | 2 | 160,000 | 35 | 193,745 | 12 | 319,000 | 685 | 207,490 | 20 | 22,340 | 1 | 80,000 | 3 | 101,500 |
| | 1929 | 4 | 92,700 | 3 | 108,213 | 32 | 703,300 | 7 | 244,750 | 525 | 138,706 | 11 | 15,450 | 2 | 52,000 | 5 | 251,681 |
| Oklahoma City, Okla. | 1928 | | | 1 | 1,500 | 8 | 296,700 | 8 | 136,500 | 875 | 188,190 | 8 | 30,100 | 2 | 50,000 | 6 | 114,100 |
| | 1929 | 3 | 175,000 | 3 | 18,000 | 7 | 62,000 | 4 | 206,000 | 1,090 | 284,055 | 18 | 89,400 | 3 | 262,000 | 1 | 10,000 |
| Omaha, Nebr. | 1928 | 3 | 398,000 | 1 | 1,400 | 3 | 96,000 | 2 | 48,000 | 168 | 31,616 | 11 | 25,500 | | | 1 | 3,500 |
| | 1929 | 1 | 16,000 | | | 6 | 298,000 | 6 | 93,500 | 146 | 45,457 | 17 | 96,800 | | | | |
| Paterson, N. J. | 1928 | | | 4 | 210,000 | 8 | 455,750 | 1 | 3,500 | 169 | 80,919 | 8 | 20,800 | 1 | 600,000 | | |
| | 1929 | 1 | 25,000 | 5 | 129,000 | 3 | 64,000 | 153 | 86,150 | 6 | 11,100 | | | | | | |
| Philadelphia, Pa. | 1928 | 14 | 3,712,000 | 16 | 815,700 | 80 | 2,746,695 | 55 | 1,216,760 | 706 | 521,470 | | | 6 | 2,186,600 | 32 | 3,575,665 |
| | 1929 | 6 | 160,660 | 7 | 899,500 | 51 | 1,343,425 | | | 556 | 1,129,870 | | | 1 | 650,000 | 19 | 6,808,875 |
| Pittsburgh, Pa. | 1928 | 5 | 252,960 | 6 | 821,500 | 10 | 794,500 | 2 | 168,000 | 777 | 785,426 | 19 | 112,050 | 1 | 4,000,000 | 10 | 6,952,050 |
| | 1929 | 1 | 30,000 | 3 | 135,000 | 14 | 154,800 | 11 | 56,500 | 679 | 393,382 | 5 | 14,500 | 4 | 1,115,000 | 5 | 29,100 |

TABLE 7.—NUMBER AND ESTIMATED COST OF BUILDINGS (NEW CONSTRUCTION, AND REPAIRS, ALTERATIONS, AND ADDITIONS TO OLD BUILDINGS) COVERED BY PERMITS ISSUED IN THE FIRST HALF OF 1928 AND OF 1929, BY INTENDED USE OF BUILDINGS—Continued

PART 2.—NEW NONRESIDENTIAL BUILDINGS—Continued

| City and State | First half of each year | Amusement and recreation places | | Churches | | Factories, shops, etc. | | Garages (public) | | Garages (private) | | Gasoline and service stations | | Institutions | | Office buildings | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Number | Cost | Number | Cost | Number | Cost | Number | Cost | Number | Cost | Number | Cost | Number | Cost | Number | Cost |
| Portland, Oreg | 1928 | 6 | $866,000 | 2 | $150,000 | 16 | $155,350 | 33 | $529,005 | 1,252 | $221,620 | 15 | $45,000 | | | 6 | $1,156,500 |
| | 1929 | 2 | 95,000 | 5 | 79,500 | 10 | 258,900 | 8 | 122,500 | 822 | 134,945 | 12 | 30,720 | 1 | $9,000 | | |
| Providence, R. I | 1928 | | | | | 9 | 230,000 | 10 | 290,000 | 450 | 307,160 | 23 | 34,500 | 1 | 50,000 | 14 | 153,900 |
| | 1929 | | | 1 | 90,000 | 12 | 1,076,800 | 7 | 107,500 | 388 | 284,750 | 2 | 3,500 | 2 | 400,000 | 11 | 493,100 |
| Reading, Pa | 1928 | | | | | 6 | 38,895 | 17 | 225,125 | 165 | 86,545 | 6 | 12,000 | | | 4 | 95,575 |
| | 1929 | | | | | 7 | 278,000 | 5 | 22,800 | 142 | 87,729 | 8 | 37,700 | | | 2 | 247,000 |
| Richmond, Va | 1928 | | | 3 | 104,800 | 1 | 17,000 | 1 | 3,000 | 153 | 60,802 | | | | | 2 | 18,000 |
| | 1929 | 2 | 140,075 | 2 | 72,500 | | | 5 | 169,000 | 94 | 70,619 | | | | | 5 | 2,401,800 |
| Rochester, N. Y | 1928 | 1 | 85,000 | 3 | 116,300 | 5 | 143,050 | 6 | 219,000 | 809 | 284,149 | 13 | 28,250 | | | 3 | 144,500 |
| | 1929 | 2 | 143,000 | 3 | 191,482 | 3 | 672,900 | 1 | 5,500 | 685 | 222,119 | 18 | 64,300 | | | 4 | 1,064,800 |
| St. Louis, Mo | 1928 | 45 | 28,694 | 12 | 496,500 | 16 | 289,850 | 6 | 390,000 | 1,794 | 417,251 | 15 | 38,900 | 5 | 490,000 | 4 | 760,000 |
| | 1929 | 56 | 45,600 | 3 | 41,000 | 23 | 389,100 | | | 1,419 | 312,327 | 1 | 2,000 | 3 | 795,000 | 3 | 1,255,000 |
| St. Paul, Minn | 1928 | | | 1 | 48,000 | 3 | 97,200 | 1 | 2,400 | 638 | 155,634 | 2 | 14,000 | | | 1 | 36,000 |
| | 1929 | 1 | 52,800 | 3 | 47,280 | 5 | 214,200 | 4 | 43,000 | 498 | 120,864 | 7 | 60,000 | 1 | 102,000 | 1 | 1,140,000 |
| Salt Lake City, Utah | 1928 | | | 2 | 27,000 | 3 | 9,400 | 7 | 84,500 | 65 | 11,964 | 17 | 71,800 | | | 1 | 38,000 |
| | 1929 | | | | | 7 | 18,350 | 9 | 125,100 | 42 | 8,606 | 35 | 89,600 | | | 3 | 63,000 |
| San Antonio, Tex | 1928 | | | 4 | 185,800 | 6 | 68,900 | 5 | 118,000 | 182 | 66,171 | 33 | 143,500 | | | 2 | 2,070,000 |
| | 1929 | | | 8 | 86,175 | 11 | 266,135 | | | 263 | 113,401 | 30 | 180,250 | 2 | 37,875 | 10 | 3,943,300 |
| San Diego, Calif | 1928 | 6 | 191,800 | 3 | 95,050 | 13 | 33,820 | 13 | 203,900 | 377 | 92,118 | 16 | 64,300 | 5 | 511,500 | 13 | 25,725 |
| | 1929 | 3 | 630,000 | 4 | 15,450 | 3 | 10,700 | 32 | 15,310 | 220 | 54,696 | 19 | 30,504 | 1 | 32,000 | 15 | 80,470 |
| San Francisco, Calif | 1928 | 6 | 343,750 | 2 | 102,000 | 18 | 192,950 | 4 | 227,000 | 71 | 71,556 | 15 | 65,000 | | | 21 | 1,671,575 |
| | 1929 | 1 | 5,000 | | | 17 | 712,230 | 4 | 63,000 | 43 | 36,065 | 30 | 93,300 | 1 | 700,000 | 4 | 830,450 |
| Scranton, Pa | 1928 | 2 | 123,000 | | | | | | | 152 | 72,995 | 10 | 60,050 | 1 | 130,029 | | |
| | 1929 | | | 1 | 8,000 | 4 | 16,200 | | | 112 | 103,500 | 4 | 8,300 | | | 1 | 76,000 |
| Seattle, Wash | 1928 | 1 | 100,000 | 2 | 45,000 | 17 | 256,600 | 13 | 193,000 | 800 | 159,675 | 28 | 54,200 | | | 11 | 2,535,600 |
| | 1929 | | | 6 | 725,000 | 22 | 310,060 | 10 | 310,200 | 623 | 97,675 | 9 | 29,250 | 1 | 15,000 | 17 | 3,849,350 |
| Somerville, Mass | 1928 | | | | | | | | | 10 | 7,500 | | | | | | |
| | 1929 | | | | | 3 | 11,400 | 1 | 85,000 | 70 | 49,195 | 4 | 22,500 | | | | |
| Spokane, Wash | 1928 | 2 | 24,550 | 1 | 337,000 | 7 | 7,600 | 11 | 275,600 | 357 | 40,952 | 6 | 20,200 | 1 | 80,000 | | |
| | 1929 | | | | | 7 | 13,850 | 5 | 29,500 | 293 | 31,950 | 13 | 28,650 | | | | |
| Springfield, Mass | 1928 | 4 | 230,000 | | | 2 | 31,000 | | | 341 | 139,700 | 8 | 28,354 | 1 | 110,000 | 2 | 168,000 |
| | 1929 | | | | | 2 | 19,600 | | | 286 | 94,990 | 6 | 27,810 | | | 6 | 648,700 |
| Syracuse, N. Y | 1928 | 5 | 258,000 | 1 | 25,000 | 5 | 324,790 | 9 | 75,500 | 603 | 203,860 | 17 | 49,600 | | | 3 | 116,000 |
| | 1929 | | | 3 | 230,000 | 8 | 53,500 | 10 | 202,500 | 529 | 173,025 | 4 | 18,800 | 1 | 250,000 | 3 | 50,000 |
| Tacoma, Wash | 1928 | | | | | 10 | 242,000 | 5 | 88,500 | 35 | 7,000 | 10 | 16,500 | | | 4 | 15,500 |
| | 1929 | | | 2 | 36,000 | 15 | 245,000 | 12 | 185,000 | 173 | 24,545 | 14 | 32,300 | 1 | 100,000 | | |
| Tampa, Fla | 1928 | 4 | 205,100 | 2 | 46,000 | 6 | 96,300 | 2 | 3,100 | 199 | 28,900 | 3 | 5,600 | | | 2 | 5,500 |
| | 1929 | 8 | 90,694 | 2 | 6,000 | 3 | 13,200 | | | 108 | 11,355 | 7 | 55,200 | | | 1 | 180,000 |

| City and State | First half of each year | Public buildings | | Public works and utilities | | Schools, libraries, etc. | | Sheds | | Stables and barns | | Stores, warehouses, etc. | | All other | | Total | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Number | Cost | Number | Cost | Number | Cost | Number | Cost | Number | Cost | Number | Cost | Number | Cost | Number | Cost |
| Toledo, Ohio | 1928 | 3 | 1,308,500 | 2 | 53,500 | 4 | 182,000 | 6 | 78,000 | 1,178 | 283,787 | 1 | 35,000 | 1 | 1,203,000 | | |
| | 1929 | 2 | 120,000 | | | 20 | 318,988 | 7 | 40,800 | 1,017 | 231,123 | 8 | 8,900 | | | | |
| Trenton, N. J | 1928 | 1 | 447,500 | 1 | 28,400 | 8 | 78,900 | 1 | 6,500 | 170 | 62,247 | 5 | 22,000 | 1 | 260,000 | | |
| | 1929 | | | 1 | 118,000 | 18 | 327,240 | 7 | 11,523 | 163 | 70,955 | 2 | 15,700 | 1 | 249,173 | | |
| Tulsa, Okla | 1928 | | | 2 | 15,000 | 13 | 115,700 | 12 | 225,000 | 774 | 256,771 | 12 | 46,600 | | | 1 | 375,000 |
| | 1929 | | | 3 | 6,000 | 14 | 146,050 | 8 | 68,500 | 650 | 240,556 | | | | | | |
| Utica, N. Y | 1928 | | | 2 | 150,000 | 1 | 700 | 4 | 161,200 | 103 | 39,660 | 14 | 23,890 | | | 1 | 6,000 |
| | 1929 | | | 2 | 170,000 | 1 | 30,000 | 2 | 30,600 | 80 | 34,150 | 3 | 52,000 | | | | |
| Washington, D. C | 1928 | 5 | 94,296 | 4 | 618,350 | 5 | 78,000 | 13 | 422,740 | 794 | 237,605 | 7 | 44,000 | 2 | 303,491 | 11 | 1,848,000 |
| | 1929 | 5 | 107,656 | 4 | 194,500 | 2 | 105,000 | 3 | 38,700 | 709 | 191,240 | 17 | 108,500 | 3 | 38,457 | 2 | 198,000 |
| Wilmington, Del | 1928 | | | | | | | | | 352 | 100,327 | 4 | 31,500 | 1 | 118,631 | 1 | 33,000 |
| | 1929 | | | 2 | 195,000 | 2 | 38,000 | | | 243 | 101,088 | 9 | 83,000 | | | 2 | 1,321,000 |
| Worcester, Mass | 1928 | 6 | 40,000 | 2 | 250,000 | 12 | 67,300 | 41 | 116,075 | 179 | 82,332 | 8 | 19,000 | | | 2 | 56,200 |
| | 1929 | 5 | 319,500 | 1 | 70,000 | 11 | 330,400 | 28 | 136,023 | 167 | 76,950 | 13 | 27,100 | | | 1 | 5,400 |
| Yonkers, N. Y | 1928 | | | 1 | 150,000 | 5 | 276,500 | 25 | 732,800 | 278 | 172,747 | 8 | 179,900 | | | 1 | 20,000 |
| | 1929 | 2 | 54,000 | 2 | 27,000 | | | 8 | 219,300 | 195 | 116,906 | 25 | 67,200 | 2 | 295,000 | 3 | 2,030,000 |
| Youngstown, Ohio | 1928 | 5 | 58,000 | 1 | 4,500 | 8 | 14,925 | 3 | 26,000 | 473 | 71,603 | 7 | 12,700 | 1 | 400,000 | | |
| | 1929 | 1 | 200 | 2 | 45,000 | 2 | 350,000 | 4 | 39,400 | 428 | 90,329 | 7 | 67,700 | | | 4 | 42,150 |
| Total (85 cities) | 1928 | 504 | 32,885,048 | 337 | 18,930,889 | 1,284 | 55,958,789 | 1,365 | 27,443,246 | 56,255 | 19,436,219 | 1,641 | 5,172,024 | 86 | 25,592,883 | 515 | 112,567,168 |
| | 1929 | 279 | 19,342,518 | 254 | 13,688,491 | 1,358 | 57,046,617 | 1,368 | 21,851,457 | 47,823 | 17,390,325 | 1,263 | 5,540,076 | 73 | 15,561,325 | 443 | 116,550,050 |
| Akron, Ohio | 1928 | 1 | $61,000 | 1 | $25,000 | | | 16 | $3,545 | | | 61 | $271,513 | 5 | $209,050 | 1,133 | $1,337,962 |
| | 1929 | | | 2 | 452,300 | 2 | $330,000 | 20 | 5,690 | | | 86 | 1,833,185 | 3 | 39,200 | 1,419 | 3,533,971 |
| Albany, N. Y | 1928 | | | 1 | 25,000 | 1 | 500,000 | | | | | 10 | 245,600 | | | 197 | 3,486,390 |
| | 1929 | | | 1 | 10,000 | | | | | | | 3 | 28,000 | | | 120 | 2,871,472 |
| Atlanta, Ga | 1928 | 2 | 23,000 | 1 | 1,700,000 | 11 | 1,673,529 | 87 | 15,427 | | | 64 | 563,363 | | | 335 | 6,282,914 |
| | 1929 | | | 2 | 335,000 | 1 | 7,000 | 72 | 9,323 | | | 67 | 1,620,922 | | | 300 | 2,874,214 |
| Baltimore, Md | 1928 | 1 | 12,000 | | | 8 | 447,000 | | | | | 51 | 357,000 | 1 | 6,000 | 1,429 | 3,229,100 |
| | 1929 | 1 | 325,000 | 1 | 20,000 | 3 | 370,000 | | | | | 28 | 1,685,000 | | | 1,060 | 5,752,900 |
| Birmingham, Ala | 1928 | 2 | 12,000 | | | 10 | 582,726 | 30 | 3,785 | 1 | $50 | 107 | 1,156,414 | 4 | 33,900 | 440 | 3,685,873 |
| | 1929 | 1 | 2,233,000 | 2 | 17,500 | 2 | 285,600 | 42 | 7,020 | 1 | 50 | 29 | 355,512 | 1 | 20,000 | 277 | 3,967,786 |
| Boston, Mass | 1928 | | | 6 | 1,529,000 | | | 125 | 147,484 | 1 | 2,500 | 86 | 3,904,150 | 2 | 60,000 | 765 | 9,197,684 |
| | 1929 | 2 | 450,000 | 3 | 276,000 | 6 | 2,447,300 | 128 | 314,421 | | | 53 | 2,140,370 | 2 | 160,000 | 712 | 10,274,643 |
| Bridgeport, Conn | 1928 | | | 1 | 200,000 | 1 | 120,000 | 5 | 4,800 | | | 8 | 130,600 | | | 233 | 662,419 |
| | 1929 | 1 | 14,000 | | | | | 9 | 10,090 | | | 7 | 35,950 | | | 224 | 1,040,285 |
| Buffalo, N. Y | 1928 | | | 3 | 22,100 | 7 | 955,000 | 26 | 23,850 | | | 60 | 1,731,810 | | | 1,453 | 6,611,765 |
| | 1929 | 15 | 1,004,544 | | | | | 6 | 2,730 | | | 44 | 1,468,475 | | | 1,006 | 4,014,129 |
| Cambridge, Mass | 1928 | | | | | | | 5 | 5,690 | 1 | 1,600 | 14 | 1,084,300 | | | 128 | 2,402,430 |
| | 1929 | | | 1 | 25,000 | 1 | 478,000 | 2 | 1,830 | | | 13 | 148,150 | | | 109 | 2,372,335 |
| Camden, N. J | 1928 | | | 6 | 115,000 | | | | | | | 10 | 1,601,350 | | | 185 | 3,128,885 |
| | 1929 | | | | | 1 | 487,343 | | | | | 1 | 5,750 | | | 130 | 847,658 |

TABLE 7.—NUMBER AND ESTIMATED COST OF BUILDINGS (NEW CONSTRUCTION, AND REPAIRS, ALTERATIONS, AND ADDITIONS TO OLD BUILDINGS) COVERED BY PERMITS ISSUED IN THE FIRST HALF OF 1928 AND OF 1929, BY INTENDED USE OF BUILDINGS—Continued

PART 2.—NEW NONRESIDENTIAL BUILDINGS—Continued

| City and State | First half of each year | Public buildings | | Public works and utilities | | Schools, libraries, etc. | | Sheds | | Stables and barns | | Stores, warehouses, etc. | | All other | | Total | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Number | Cost | Number | Cost | Number | Cost | Number | Cost | Number | Cost | Number | Cost | Number | Cost | Number | Cost |
| Canton, Ohio | 1928 | | | | | | | 7 | $450 | 1 | $50 | 11 | $26,025 | | | 308 | $495,367 |
| | 1929 | | | 3 | $24,000 | | | 4 | 190 | | | 21 | 172,050 | | | 352 | 686,560 |
| Chicago, Ill | 1928 | 7 | $2,278,000 | 13 | 2,265,800 | 27 | $7,969,000 | 83 | 48,695 | 1 | 11,000 | 336 | 7,925,600 | | | 3,512 | 59,559,395 |
| | 1929 | 1 | 15,000 | 7 | 2,108,500 | 7 | 1,685,000 | 72 | 31,150 | 1 | 12,000 | 368 | 25,079,375 | 1 | $40,000 | 2,703 | 54,141,825 |
| Cincinatti, Ohio | 1928 | | | | | 1 | 150,000 | 54 | 17,010 | 1 | 6,000 | 21 | 148,400 | | | 873 | 2,207,515 |
| | 1929 | 1 | 50,000 | 1 | 300,000 | 3 | 1,290,000 | 39 | 10,365 | | | 16 | 565,500 | | | 679 | 4,863,800 |
| Cleveland, Ohio | 1928 | | | 2 | 5,050,000 | 5 | 2,446,000 | | | 2 | 15,300 | 92 | 2,603,300 | | | 2,075 | 12,785,550 |
| | 1929 | | | 23 | 1,564,400 | 2 | 510,000 | | | 1 | 200 | 276 | 2,160,200 | | | 2,098 | 6,910,000 |
| Columbus, Ohio | 1928 | | | | | | | 43 | 38,300 | 1 | 400 | 35 | 297,500 | | | 1,437 | 1,315,050 |
| | 1929 | 1 | 40,000 | | | 2 | 83,500 | 38 | 23,850 | | | 34 | 287,950 | | | 908 | 965,500 |
| Dallas, Tex | 1928 | 1 | 18,000 | | | | | 39 | 10,960 | | | 93 | 765,750 | | | 297 | 1,371,465 |
| | 1929 | | | | | | | 36 | 27,066 | | | 87 | 1,632,320 | | | 261 | 1,963,070 |
| Dayton, Ohio | 1928 | | | | | | | 32 | 18,793 | | | 2 | 144,000 | | | 603 | 1,334,272 |
| | 1929 | | | | | | | 26 | 6,421 | | | 6 | 111,000 | | | 482 | 1,778,830 |
| Denver, Colo | 1928 | 3 | 33,650 | | | 7 | 475,000 | | | | | 80 | 1,589,050 | | | 721 | 3,030,950 |
| | 1929 | 3 | 4,267,000 | | | 6 | 376,400 | 232 | 39,050 | | | 37 | 339,100 | 212 | 214,200 | 786 | 7,017,700 |
| Des Moines, Iowa | 1928 | 1 | 523,000 | 1 | 1,000,000 | | | 15 | 2,893 | 1 | 100 | 24 | 66,625 | 5 | 46,000 | 315 | 1,886,523 |
| | 1929 | | | | | | | 21 | 5,382 | | | 14 | 80,550 | 16 | 45,490 | 226 | 245,850 |
| Detroit, Mich | 1928 | 4 | 114,813 | | | 8 | 1,614,411 | | | | | 311 | 8,913,351 | 6 | 990,000 | 5,948 | 22,475,977 |
| | 1929 | | | 4 | 283,949 | 5 | 850,000 | 3 | 2,700 | | | 278 | 3,670,742 | 9 | 180,750 | 5,788 | 17,443,540 |
| Duluth, Minn | 1928 | | | | | 1 | 17,500 | 22 | 2,475 | 1 | 100 | 7 | 17,300 | 2 | 839,000 | 192 | 924,689 |
| | 1929 | | | | | 1 | 14,500 | 34 | 20,065 | | | 5 | 48,500 | | | 216 | 192,275 |
| El Paso, Tex | 1928 | | | 1 | 30,000 | | | | | | | 20 | 303,440 | | | 152 | 413,180 |
| | 1929 | | | 1 | 4,000 | 1 | 6,266 | 12 | 1,915 | | | 29 | 320,080 | 4 | 28,873 | 137 | 500,957 |
| Fall River, Mass | 1928 | | | 2 | 2,210 | | | 16 | 6,560 | | | 7 | 18,050 | 2 | 175 | 112 | 373,175 |
| | 1929 | | | | | | | 19 | 2,308 | | | 17 | 35,542 | | | 116 | 93,245 |
| Flint, Mich | 1928 | 1 | 14,000 | 1 | 12,000 | | | 70 | 12,867 | | | 53 | 558,830 | 147 | 50,012 | 1,071 | 1,484,520 |
| | 1929 | | | | | 1 | 346,000 | 52 | 11,005 | | | 27 | 379,160 | 11 | 1,380 | 922 | 1,434,262 |
| Fort Wayne, Ind | 1928 | | | | | 1 | 81,304 | 3 | 725 | | | 16 | 320,785 | 2 | 4,170 | 413 | 609,440 |
| | 1929 | | | 2 | 100,834 | 1 | 6,500 | 8 | 4,500 | | | 15 | 212,660 | | | 439 | 720,121 |
| Fort Worth, Tex | 1928 | | | | | | | 29 | 9,500 | 24 | 6,000 | 20 | 148,500 | 11 | 2,110 | 408 | 639,802 |
| | 1929 | | | 2 | 1,000,747 | 1 | 32,500 | 12 | 3,742 | | | 24 | 406,568 | | | 198 | 2,714,059 |
| Grand Rapids, Mich | 1928 | | | | | 4 | 374,000 | 26 | 28,575 | | | 27 | 207,800 | | | 795 | 1,344,800 |
| | 1929 | | | 1 | 70,000 | 1 | 47,000 | 19 | 20,840 | | | 19 | 480,400 | 101 | 88,545 | 840 | 1,346,045 |
| Hartford, Conn | 1928 | | | 1 | 2,000 | 2 | 385,000 | 12 | 6,205 | | | 17 | 459,250 | 10 | 25,402 | 296 | 1,622,612 |
| | 1929 | 1 | 52,744 | 4 | 743,016 | | | 32 | 12,105 | 2 | 40,025 | 9 | 651,225 | | | 191 | 8,757,752 |
| Houston, Tex | 1928 | 3 | 63,000 | 3 | 373,968 | 2 | 295,000 | | | | | 101 | 1,166,019 | 245 | 282,488 | 552 | 7,848,264 |
| | 1929 | | | 15 | 5,366,800 | 9 | 833,440 | | | | | 54 | 1,203,716 | 61 | 219,923 | 281 | 9,348,769 |
| Indianapolis, Ind | 1928 | | | | | 1 | 142,000 | 31 | 4,174 | | | 69 | 1,395,620 | | | 1,589 | 3,483,113 |

| | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Indianapolis, Ind | 1928 | | | | | 1 | 142,000 | 31 | 4,174 | | | 69 | 1,395,620 | | | 1,589 | 3,483,112 |
| | 1929 | | | | | | | 27 | 4,941 | | | 70 | 1,069,850 | | | 753 | 2,955,306 |
| Jacksonville, Fla | 1928 | 1 | 130,000 | 1 | 60,000 | 1 | 3,500 | 58 | 20,485 | 1 | 7,000 | 41 | 212,950 | 71 | 6,660 | 381 | 948,425 |
| | 1929 | | | 1 | 430,000 | | | 60 | 14,960 | | | 47 | 318,675 | 27 | 3,805 | 271 | 1,072,990 |
| Jersey City, N. J | 1928 | | | 9 | 550,650 | | | 12 | 18,350 | 1 | 1,500 | 7 | 126,940 | | | 200 | 1,932,418 |
| | 1929 | | | 5 | 349,500 | 1 | 200,000 | 4 | 2,600 | | | 12 | 3,607,550 | | | 231 | 5,677,525 |
| Kansas City, Kans | 1928 | | | | | 1 | 6,000 | | | | | 34 | 127,780 | | | 179 | 597,840 |
| | 1929 | | | | | 1 | 60,000 | | | | | 12 | 37,150 | | | 136 | 562,525 |
| Kansas City, Mo | 1928 | 1 | 4,000 | 3 | 41,500 | 1 | 90,000 | 2 | 200 | 4 | 4,100 | 38 | 381,850 | 58 | 32,900 | 347 | 3,406,475 |
| | 1929 | 2 | 15,000 | 1 | 100,000 | | | 24 | 5,900 | | | 46 | 665,500 | 3 | 26,400 | 261 | 1,249,250 |
| Knoxville, Tenn | 1928 | | | | | | | 72 | 50,470 | | | 30 | 265,360 | | | 248 | 1,073,273 |
| | 1929 | | | 3 | 15,600 | | | 26 | 14,964 | | | 26 | 141,960 | | | 224 | 1,311,486 |
| Long Beach, Calif | 1928 | 7 | 40,000 | 5 | 46,000 | 1 | 128,000 | 27 | 2,950 | | | 145 | 1,052,970 | | | 928 | 1,770,970 |
| | 1929 | 2 | 67,405 | 14 | 1,736,075 | 2 | 106,650 | 12 | 1,775 | | | 195 | 1,953,695 | | | 997 | 6,084,835 |
| Los Angeles, Calif | 1928 | | | 14 | 406,852 | 14 | 832,345 | 761 | 259,791 | | | 325 | 4,457,991 | 74 | 157,395 | 6,164 | 12,823,771 |
| | 1929 | 2 | 195,000 | 22 | 530,600 | 23 | 1,815,100 | 724 | 298,413 | | | 289 | 5,819,050 | 51 | 829,517 | 5,398 | 19,300,847 |
| Louisville, Ky | 1928 | | | | | 5 | 352,500 | 192 | 24,910 | 9 | 2,150 | 31 | 575,500 | | | 607 | 2,854,360 |
| | 1929 | | | 7 | 1,214,000 | 4 | 1,177,750 | 53 | 11,475 | 11 | 9,200 | 134 | 845,525 | | | 510 | 3,938,365 |
| Lowell, Mass | 1928 | | | | | | | 14 | 4,115 | | | 2 | 10,025 | 3 | 105 | 80 | 166,335 |
| | 1929 | | | | | 1 | 30,000 | 7 | 325 | | | 3 | 11,600 | | | 92 | 97,790 |
| Lynn, Mass | 1928 | 1 | 1,400 | 1 | 500 | | | 12 | 6,425 | 4 | 24,202 | 12 | 119,100 | 16 | 176 | 232 | 466,423 |
| | 1929 | 2 | 270,000 | 2 | 32,000 | | | 31 | 1,440 | 6 | 4,025 | 7 | 65,000 | 3 | 13,506 | 228 | 587,313 |
| Memphis, Tenn | 1928 | | | | | 3 | 851,500 | 37 | 16,380 | 2 | 780 | 34 | 841,230 | | | 624 | 3,022,945 |
| | 1929 | 1 | 17,500 | | | | | 7 | 1,430 | | | 22 | 676,910 | | | 444 | 1,302,473 |
| Miami, Fla | 1928 | | | | | 1 | 600 | 82 | 8,237 | | | 29 | 153,825 | 68 | 40,862 | 349 | 471,866 |
| | 1929 | 1 | 1,000 | 2 | 2,000 | | | 85 | 25,120 | | | 20 | 671,900 | 1 | 500 | 231 | 1,092,193 |
| Milwaukee, Wis | 1928 | | | | | 2 | 27,000 | 235 | 81,769 | | | 34 | 995,700 | | | 1,683 | 2,552,942 |
| | 1929 | | | 2 | 10,000 | 1 | 350,000 | | | | | 29 | 666,300 | 196 | 177,495 | 1,586 | 4,016,623 |
| Minneapolis, Minn | 1928 | | | 3 | 4,300 | 5 | 1,423,530 | 12 | 950 | | | 66 | 485,375 | 8 | 59,055 | 1,275 | 3,428,425 |
| | 1929 | | | | | 2 | 172,000 | 19 | 2,900 | | | 64 | 687,465 | 18 | 19,000 | 1,115 | 7,463,860 |
| Nashville, Tenn | 1928 | | | | | 3 | 425,000 | 9 | 9,780 | 29 | 2,285 | 38 | 452,200 | | | 154 | 1,537,835 |
| | 1929 | 1 | 85,000 | | | | | 29 | 25,300 | | | 27 | 308,900 | 4 | 3,600 | 138 | 826,080 |
| Newark, N. J | 1928 | 1 | 38,031 | 3 | 13,000 | 2 | 735,000 | 3 | 1,350 | 2 | 9,500 | 62 | 768,557 | | | 630 | 4,064,846 |
| | 1929 | | | 10 | 127,000 | 3 | 835,000 | 6 | 5,700 | 16 | 251,650 | 61 | 755,985 | 3 | 8,800 | 575 | 8,087,716 |
| New Bedford, Mass | 1928 | | | | | | | 47 | 5,110 | | | 9 | 89,900 | | | 132 | 176,000 |
| | 1929 | | | | | 2 | 15,500 | 34 | 2,600 | | | 3 | 46,000 | | | 112 | 163,665 |
| New Haven, Conn | 1928 | | | 1 | 600,000 | 2 | 258,000 | 26 | 63,000 | 1 | 800 | 3 | 94,000 | | | 217 | 2,086,300 |
| | 1929 | 1 | 617,000 | 4 | 459,902 | | | 34 | 19,810 | | | 7 | 147,360 | | | 219 | 1,959,772 |
| New Orleans, La | 1928 | | | | | 4 | 236,900 | 54 | 30,312 | 2 | 6,700 | 27 | 198,325 | 12 | 5,880 | 184 | 1,037,300 |
| | 1929 | 2 | 2,825,000 | 4 | 669,419 | | | 28 | 6,300 | 2 | 16,046 | 35 | 235,877 | | | 173 | 4,737,869 |
| New York, N. Y.: | | | | | | | | | | | | | | | | | |
| The Bronx | 1928 | | | | | 6 | 2,332,000 | 1 | 500 | | | 112 | 3,557,400 | 2 | 1,500 | 1,198 | 18,142,539 |
| | 1929 | 2 | 235,000 | | | 4 | 1,280,000 | | | | | 70 | 1,875,500 | 2 | 2,300 | 1,013 | 12,506,700 |
| Brooklyn | 1928 | 8 | 1,238,000 | | | 4 | 622,000 | | | | | 124 | 9,029,400 | 404 | 506,100 | 3,132 | 27,096,920 |
| | 1929 | 8 | 7,415,000 | | | 5 | 3,943,000 | | | | | 132 | 3,084,100 | 381 | 793,869 | 2,781 | 26,478,669 |
| Manhattan | 1928 | 9 | 1,815,500 | | | 5 | 1,610,000 | | | | | 30 | 6,456,000 | 23 | 28,075 | 490 | 87,163,880 |
| | 1929 | 2 | 95,000 | | | 3 | 3,900,000 | | | | | 27 | 9,048,500 | 21 | 133,800 | 347 | 78,706,400 |
| Queens | 1928 | 4 | 327,000 | 5 | 55,500 | 5 | 2,611,000 | 34 | 49,300 | 5 | 25,150 | 244 | 3,513,225 | 148 | 66,745 | 3,798 | 14,502,873 |
| | 1929 | 2 | 328,500 | 6 | 93,600 | 10 | 3,902,500 | 19 | 7,200 | 1 | 400 | 203 | 2,932,825 | 160 | 86,799 | 3,593 | 15,464,778 |
| Richmond | 1928 | 1 | 5,000 | 2 | 202,000 | | | 19 | 9,715 | | | 79 | 317,977 | 60 | 13,291 | 608 | 2,159,195 |
| | 1929 | 2 | 310,000 | | | 1 | 250,000 | 21 | 15,172 | 1 | 150 | 35 | 526,425 | 55 | 12,900 | 508 | 1,835,379 |

TABLE 7.—NUMBER AND ESTIMATED COST OF BUILDINGS (NEW CONSTRUCTION, AND REPAIRS, ALTERATIONS, AND ADDITIONS TO OLD BUILDINGS) COVERED BY PERMITS ISSUED IN THE FIRST HALF OF 1928 AND OF 1929, BY INTENDED USE OF BUILDINGS—Continued

PART 2.—NEW NONRESIDENTIAL BUILDINGS—Continued

| City and State | First half of each year | Public buildings | | Public works and utilities | | Schools, libraries, etc. | | Sheds | | Stables and barns | | Stores, warehouses, etc. | | All other | | Total | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Number | Cost | Number | Cost | Number | Cost | Number | Cost | Number | Cost | Number | Cost | Number | Cost | Number | Cost |
| Norfolk, Va | 1928 | 1 | $1,300 | 4 | $295,700 | 1 | $151,000 | 24 | $4,995 | | | 7 | $37,350 | | | 283 | $697,098 |
| | 1929 | | | 1 | 8,000 | | | 11 | 5,350 | 2 | $300 | 6 | 379,400 | | | 245 | 590,953 |
| Oakland, Calif | 1928 | 1 | 7,500 | 13 | 263,222 | 9 | 900,750 | 4 | 2,835 | | | 61 | 3,381,980 | 9 | $13,416 | 864 | 5,941,527 |
| | 1929 | | | 7 | 39,250 | 1 | 4,000 | 14 | 11,800 | | | 48 | 1,707,593 | 12 | 36,607 | 671 | 3,406,050 |
| Oklahoma City, Okla | 1928 | | | 1 | 10,000 | 13 | 1,068,383 | 9 | 3,500 | 1 | 1,800 | 58 | 534,575 | | | 990 | 2,435,348 |
| | 1929 | 4 | 299,000 | 14 | 719,250 | | | 17 | 21,260 | | | 94 | 1,423,535 | 7 | 995 | 1,265 | 3,570,495 |
| Omaha, Nebr | 1928 | | | | | 1 | 100,000 | 14 | 62,825 | | | 53 | 464,245 | 4 | 29,000 | 261 | 1,260,086 |
| | 1929 | | | | | 1 | 65,000 | 10 | 2,875 | | | 35 | 255,100 | | | 222 | 872,732 |
| Paterson, N. J | 1928 | | | 2 | 6,000 | 1 | 48,579 | 6 | 1,700 | | | 28 | 195,725 | 3 | 4,200 | 231 | 1,627,173 |
| | 1929 | 1 | 867,000 | 4 | 128,000 | | | 5 | 4,494 | | | 21 | 125,594 | 5 | 15,500 | 204 | 1,455,838 |
| Philadelphia, Pa | 1928 | | | 1 | 375,000 | 13 | 3,309,190 | | | 1 | 10,000 | 110 | 4,241,205 | 22 | 110,415 | 1,056 | 22,820,700 |
| | 1929 | | | 2 | 50,000 | 14 | 3,606,190 | 6 | 63,670 | 2 | 32,500 | 96 | 17,490,040 | 39 | 342,840 | 799 | 32,577,570 |
| Pittsburgh, Pa | 1928 | | | 4 | 856,831 | 10 | 217,435 | 11 | 1,160 | 1 | 50 | 92 | 1,098,230 | | | 948 | 16,060,132 |
| | 1929 | 3 | 2,113,000 | 3 | 3,405,200 | 5 | 772,300 | 16 | 5,210 | 1 | 100 | 33 | 832,477 | 38 | 71,522 | 821 | 9,128,091 |
| Portland, Oreg | 1928 | 6 | 57,200 | | | 3 | 482,200 | 179 | 243,255 | | | 35 | 892,290 | | | 1,553 | 4,798,420 |
| | 1929 | | | 5 | 101,400 | 3 | 1,230,000 | 133 | 108,180 | | | 40 | 834,350 | | | 1,041 | 3,104,495 |
| Providence, R. I | 1928 | 2 | 1,384,364 | 1 | 12,000 | 3 | 340,000 | 40 | 15,350 | | | 35 | 199,200 | 1 | 1,000 | 589 | 3,017,474 |
| | 1929 | 1 | 165,000 | 2 | 20,000 | | | 59 | 34,950 | | | 38 | 290,300 | | | 523 | 2,965,900 |
| Reading, Pa | 1928 | | | | | 1 | 78,369 | 3 | 350 | | | 8 | 29,450 | 3 | 1,800 | 213 | 568,109 |
| | 1929 | | | 1 | 100,000 | 3 | 464,750 | 8 | 925 | 1 | 500 | 11 | 588,700 | | | 188 | 1,828,104 |
| Richmond, Va | 1928 | | | | | 1 | 571,164 | 191 | 53,963 | | | 61 | 567,334 | | | 413 | 1,396,063 |
| | 1929 | | | | | 2 | 1,184,253 | 217 | 49,189 | | | 30 | 340,150 | | | 357 | 4,427,586 |
| Rochester, N. Y | 1928 | | | 1 | 11,500 | 4 | 3,025,174 | 38 | 17,815 | 1 | 200 | 33 | 367,975 | 19 | 709 | 936 | 4,443,622 |
| | 1929 | | | 1 | 400,000 | 3 | 539,387 | 42 | 10,235 | | | 27 | 509,350 | 9 | 2,466 | 798 | 3,825,539 |
| St. Louis, Mo | 1928 | 1 | 150,000 | | | 13 | 171,600 | 479 | 75,775 | | | 120 | 1,595,475 | | | 2,510 | 4,904,045 |
| | 1929 | | | 1 | 30,000 | 21 | 239,600 | 300 | 45,645 | | | 94 | 961,325 | | | 1,924 | 4,116,597 |
| St. Paul, Minn | 1928 | | | | | | | | | | | 14 | 194,400 | 183 | 199,708 | 843 | 747,342 |
| | 1929 | | | | | | | 207 | 106,497 | | | 8 | 85,600 | 13 | 55,000 | 748 | 2,027,241 |
| Salt Lake City, Utah | 1928 | | | | | | | 6 | 21,520 | | | 30 | 193,460 | 3 | 8,700 | 134 | 466,344 |
| | 1929 | | | | | 1 | 11,500 | 13 | 27,075 | | | 31 | 432,325 | | | 141 | 775,556 |
| San Antonio, Tex | 1928 | | | | | | | | | | | 59 | 619,686 | 201 | 469,979 | 492 | 3,742,036 |
| | 1929 | 10 | 818,750 | 2 | 43,750 | 3 | 70,000 | | | | | 59 | 707,490 | | | 398 | 6,267,126 |
| San Diego, Calif | 1928 | 2 | 18,500 | 3 | 435,950 | | | 96 | 21,852 | 1 | 750 | 63 | 524,015 | 40 | 20,000 | 651 | 2,239,280 |
| | 1929 | | | | | 8 | 285,241 | 100 | 49,620 | 1 | 1,000 | 52 | 888,525 | | | 458 | 2,093,516 |
| San Francisco, Calif | 1928 | 2 | 188,289 | 4 | 1,145,000 | 3 | 234,289 | 12 | 26,950 | | | 56 | 550,000 | | | 214 | 4,818,359 |
| | 1929 | 2 | 83,767 | 4 | 1,480,505 | 7 | 1,694,653 | 21 | 18,600 | 4 | 32,700 | 61 | 1,348,300 | | | 199 | 7,098,570 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Scranton, Pa | 1928 | | | | | 1 | 270,985 | 6 | 7,125 | | | 1 | 235,000 | | | 173 | 899,184 |
| | 1929 | | | | | 1 | 791,154 | 16 | 7,700 | | | 2 | 27,000 | | | 141 | 1,037,854 |
| Seattle, Wash | 1928 | 6 | 410,500 | 4 | 30,500 | 4 | 1,003,400 | 198 | 31,400 | 2 | 700 | 112 | 4,937,300 | | | 1,198 | 9,757,875 |
| | 1929 | | | 3 | 19,500 | 3 | 324,000 | 106 | 12,930 | | | 80 | 1,811,025 | 40 | 5,300 | 920 | 7,509,290 |
| Somerville, Mass | 1928 | | | | | | | 2 | 1,520 | | | 1 | 70,000 | | | 13 | 79,020 |
| | 1929 | | | | | 1 | 40,000 | 5 | 15,520 | | | 6 | 747,500 | | | 90 | 971,115 |
| Spokane, Wash | 1928 | | | 3 | 14,100 | 1 | 50,000 | 46 | 4,670 | | | 36 | 292,477 | 15 | 6,235 | 486 | 1,153,384 |
| | 1929 | | | | | 1 | 17,000 | 44 | 6,050 | | | 37 | 236,515 | 43 | 8,200 | 443 | 371,715 |
| Springfield, Mass | 1928 | | | | | | | 17 | 58,475 | | | 13 | 126,800 | 18 | 64,250 | 406 | 956,579 |
| | 1929 | | | 1 | 10,000 | 1 | 160,000 | | | | | 30 | 177,115 | | | 332 | 1,138,215 |
| Syracuse, N. Y | 1928 | | | | | 1 | 75,000 | | | | | 27 | 214,250 | 27 | 8,625 | 698 | 1,410,625 |
| | 1929 | | | 2 | 48,360 | 1 | 500,000 | 3 | 400 | | | 24 | 543,225 | 4 | 850 | 592 | 2,070,660 |
| Tacoma, Wash | 1928 | | | 2 | 9,000 | 2 | 125,000 | | | | | 20 | 248,975 | 3 | 8,500 | 91 | 760,975 |
| | 1929 | 5 | 641,000 | | | | | 226 | 32,900 | | | 15 | 64,500 | | | 463 | 1,361,245 |
| Tampa, Fla | 1928 | | | 2 | 3,900 | | | 140 | 14,100 | | | 32 | 154,075 | | | 392 | 562,575 |
| | 1929 | 1 | 5,245 | 1 | 6,000 | 1 | 30,000 | 81 | 7,820 | | | 24 | 391,650 | 3 | 750 | 240 | 797,914 |
| Toledo, Ohio | 1928 | 1 | 125,000 | 2 | 70,000 | 1 | 478,795 | | | | | 72 | 1,076,027 | | | 1,271 | 4,893,609 |
| | 1929 | 4 | 328,850 | | | 1 | 706,000 | 43 | 10,675 | | | 92 | 719,740 | | | 1,194 | 2,485,076 |
| Trenton, N. J | 1928 | | | 3 | 155,000 | 1 | 73,000 | 9 | 10,218 | 2 | 400 | 16 | 215,360 | | | 218 | 1,359,525 |
| | 1929 | | | | | | | 1 | 500 | | | 9 | 23,473 | | | 202 | 816,564 |
| Tulsa, Okla | 1928 | | | | | 2 | 211,000 | 46 | 13,600 | | | 48 | 576,200 | 5 | 1,940 | 915 | 1,836,811 |
| | 1929 | | | | | 13 | 591,214 | 44 | 16,492 | | | 79 | 2,138,237 | | | 811 | 3,207,049 |
| Utica, N. Y | 1928 | | | 1 | 50,000 | | | | | | | 5 | 218,200 | 1 | 500 | 132 | 650,060 |
| | 1929 | 1 | 227,000 | | | | | | | | | 7 | 39,500 | | | 96 | 583,250 |
| Washington, D. C | 1928 | | | 3 | 854,239 | 7 | 1,205,684 | 5 | 475 | | | 88 | 1,057,000 | 1 | 1,800 | 945 | 6,765,680 |
| | 1929 | 2 | 19,366,000 | 3 | 183,189 | 8 | 1,826,538 | 34 | 27,650 | 1 | 800 | 58 | 883,000 | | | 851 | 23,269,230 |
| Wilmington, Del | 1928 | | | | | 1 | 566,111 | | | | | 10 | 33,830 | | | 369 | 883,399 |
| | 1929 | | | 1 | 1,500 | | | 1 | 575 | | | 13 | 21,500 | | | 273 | 1,761,663 |
| Worcester, Mass | 1928 | | | 5 | 23,020 | 2 | 159,457 | 34 | 8,233 | 1 | 800 | 13 | 75,077 | 13 | 10,496 | 318 | 907,990 |
| | 1929 | | | 2 | 282,700 | 1 | 145,000 | 40 | 7,849 | | | 12 | 124,350 | 6 | 1,596 | 287 | 1,526,868 |
| Yonkers, N. Y | 1928 | 1 | 225,000 | | | | | 6 | 23,100 | 3 | 20,000 | 16 | 860,000 | 18 | 7,825 | 362 | 2,667,872 |
| | 1929 | 1 | 155,000 | 2 | 107,000 | 2 | 1,090,000 | 15 | 3,250 | | | 17 | 344,950 | 22 | 9,108 | 296 | 4,518,714 |
| Youngstown, Ohio | 1928 | | | 1 | 69,000 | | | 11 | 2,165 | | | 5 | 47,500 | | | 515 | 706,393 |
| | 1929 | | | | | 2 | 312,000 | 4 | 2,000 | | | 12 | 100,150 | | | 466 | 1,048,929 |
| Total (85 cities) | 1928 | 82 | 9,319,047 | 150 | 19,022,342 | 261 | 45,688,910 | 4,117 | 1,805,728 | 108 | 161,967 | 4,807 | 98,529,541 | 1,978 | 4,436,149 | 73,490 | 476,949,950 |
| | 1929 | 92 | 45,997,305 | 220 | 25,655,346 | 227 | 45,223,629 | 4,030 | 1,759,969 | 54 | 401,646 | 4,544 | 121,051,138 | 1,587 | 3,701,380 | 63,615 | 510,761,272 |

TABLE 7.—NUMBER AND ESTIMATED COST OF BUILDINGS (NEW CONSTRUCTION, AND REPAIRS, ALTERATIONS, AND ADDITIONS TO OLD BUILDINGS) COVERED BY PERMITS ISSUED IN THE FIRST HALF OF 1928 AND OF 1929, BY INTENDED USE OF BUILDINGS—Continued

PART 3.—REPAIRS, ALTERATIONS, AND ADDITIONS TO OLD BUILDINGS, AND GRAND TOTAL OF ALL PERMITS

| City and State | First half of each year | Repairs, etc., on residential buildings [4] | | | | Repairs, etc., on nonresidential buildings [4] | | Total repairs, etc. | | Grand total of all permits for new construction and repairs, etc. | | Rank in cost of construction | Installation permits | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Housekeeping dwellings | | Nonhousekeeping dwellings | | | | | | | | | | |
| | | Number | Cost | Number | Cost | Number | Cost | Number | Cost | Number | Cost | | Number | Cost |
| Akron, Ohio | 1928 | | | | | | | 393 | $968,135 | 2,744 | $8,775,435 | 34 | 183 | $35,832 |
| | 1929 | | | | | | | 518 | 475,899 | 3,256 | 11,092,828 | 24 | 310 | 183,110 |
| Albany, N. Y | 1928 | | | | | | | 765 | 1,443,964 | 1,158 | 8,984,754 | 31 | | |
| | 1929 | | | | | | | 698 | 1,159,492 | 946 | 6,444,964 | 41 | | |
| Atlanta, Ga | 1928 | | | | | | | 744 | 1,335,732 | 2,021 | 12,355,195 | 19 | 141 | 57,998 |
| | 1929 | | | | | | | 692 | 2,505,749 | 1,556 | 8,382,978 | 28 | 104 | 219,303 |
| Baltimore, Md | 1928 | | | | | | | 6,562 | 3,639,650 | 9,708 | 17,298,750 | 17 | | |
| | 1929 | | | | | | | 6,638 | 3,606,900 | 9,357 | 16,817,300 | 13 | | |
| Birmingham, Ala | 1928 | 1,120 | $281,707 | | | 197 | $145,454 | 1,317 | 427,161 | 2,909 | 8,509,279 | 35 | 524 | 473,904 |
| | 1929 | 907 | 202,514 | 4 | $525 | 196 | 458,087 | 1,107 | 661,126 | 1,764 | 5,848,337 | 46 | 475 | 178,657 |
| Boston, Mass | 1928 | 1,813 | 1,234,414 | 54 | 140,810 | 865 | 2,738,341 | 2,732 | 4,113,565 | 4,723 | 27,671,349 | 6 | 4,142 | 4,082,117 |
| | 1929 | 1,774 | 882,609 | 42 | 183,025 | 892 | 3,577,788 | 2,708 | 4,643,422 | 4,096 | 30,414,050 | 7 | 3,982 | 3,428,673 |
| Bridgeport, Conn | 1928 | 87 | 40,010 | | | 89 | 144,355 | 176 | 184,365 | 547 | 2,056,684 | 75 | 10 | 2,825 |
| | 1929 | 129 | 80,470 | | | 150 | 48,365 | 279 | 128,835 | 667 | 2,281,680 | 68 | 11 | 4,425 |
| Buffalo, N. Y | 1928 | 533 | 357,291 | | | 162 | 271,400 | 695 | 628,691 | 2,944 | 12,183,931 | 21 | | |
| | 1929 | 451 | 271,530 | | | 182 | 375,750 | 633 | 647,280 | 2,100 | 7,733,929 | 33 | | |
| Cambridge, Mass | 1928 | 162 | 135,090 | | | 108 | 247,323 | 270 | 382,413 | 509 | 5,502,643 | 48 | | |
| | 1929 | 203 | 210,098 | | | 133 | 957,565 | 336 | 1,167,663 | 500 | 6,986,398 | 36 | | |
| Camden, N. J | 1928 | 249 | 117,723 | | | 69 | 112,635 | 318 | 230,358 | 699 | 4,061,493 | 52 | | |
| | 1929 | 184 | 91,340 | | | 88 | 263,020 | 272 | 354,360 | 558 | 1,767,618 | 74 | | |
| Canton, Ohio | 1928 | 197 | 78,327 | | | 93 | 254,470 | 290 | 332,797 | 813 | 2,296,714 | 70 | 23 | 3,249 |
| | 1929 | 176 | 68,930 | | | 97 | 67,985 | 273 | 136,915 | 817 | 1,872,775 | 72 | 51 | 20,780 |
| Chicago, Ill | 1928 | 1,839 | 1,113,270 | | | 1,251 | 3,425,585 | 3,090 | 4,538,855 | 10,814 | 184,650,200 | 2 | 390 | 1,752,500 |
| | 1929 | 1,956 | 1,117,305 | | | 1,080 | 2,996,210 | 3,036 | 4,113,515 | 8,483 | 118,898,940 | 2 | 390 | 1,560,500 |
| Cincinnati, Ohio | 1928 | 2,730 | 757,565 | | | 340 | 1,764,190 | 3,070 | 2,521,755 | 5,073 | 16,678,055 | 15 | 2,784 | 1,901,870 |
| | 1929 | 2,506 | 1,127,420 | | | 1,368 | 135,635 | 3,874 | 1,263,055 | 5,447 | 14,013,080 | 18 | 2,727 | 2,423,920 |
| Cleveland, Ohio | 1928 | 958 | 611,800 | 5 | 164,900 | 1,481 | 3,942,375 | 2,444 | 4,719,075 | 5,612 | 27,574,725 | 7 | | |
| | 1929 | 918 | 703,925 | | | 1,258 | 3,379,525 | 2,176 | 4,083,450 | 4,993 | 18,539,750 | 9 | | |
| Columbus, Ohio | 1928 | 449 | 295,250 | 1 | 500 | 152 | 474,700 | 602 | 770,450 | 3,172 | 9,680,300 | 28 | | |
| | 1929 | 364 | 204,850 | 2 | 1,900 | 160 | 546,350 | 526 | 753,100 | 2,044 | 6,024,100 | 44 | 7,266 | 1,284,525 |
| Dallas, Tex | 1928 | 847 | 409,466 | | | 266 | 414,309 | 1,113 | 823,775 | 1,920 | 4,048,935 | 54 | 154 | 91,908 |
| | 1929 | 634 | 315,808 | | | 275 | 1,051,404 | 909 | 1,367,212 | 1,624 | 5,313,407 | 48 | 122 | 54,338 |
| Dayton, Ohio | 1928 | 356 | 187,479 | | | 182 | 499,128 | 538 | 686,607 | 1,389 | 6,983,082 | 39 | | |
| | 1929 | 367 | 162,782 | | | 150 | 438,036 | 517 | 600,818 | 1,084 | 3,443,175 | 56 | | |

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Denver, Colo | 1928 | | | | | | 1,739 | 808,850 | 3,195 | 8,982,800 | 32 | | | |
| | 1929 | | | | | | 1,848 | 964,650 | 3,144 | 11,892,350 | 20 | | | |
| Des Moines, Iowa | 1928 | 121 | 61,211 | | | 53 | 132,535 | 174 | 193,746 | 647 | 2,832,447 | 62 | | | |
| | 1929 | 66 | 67,257 | | | 54 | 147,351 | 120 | 214,608 | 532 | 1,431,133 | 78 | | | |
| Detroit, Mich | 1928 | | | | | | | 3,399 | 4,292,501 | 14,510 | 65,175,361 | 3 | | | |
| | 1929 | | | | | | | 3,401 | 7,248,866 | 13,895 | 55,855,545 | 4 | | | |
| Duluth, Minn | 1928 | 666 | 224,703 | | | 119 | 189,562 | 785 | 414,265 | 1,077 | 1,834,704 | 77 | 80 | 26,875 |
| | 1929 | 453 | 169,292 | | | 106 | 286,440 | 559 | 455,732 | 841 | 1,141,102 | 80 | 16 | 11,039 |
| El Paso, Tex | 1928 | | | | | | | 310 | 196,589 | 553 | 963,061 | 81 | | |
| | 1929 | 82 | 34,334 | | | 87 | 44,300 | 169 | 78,634 | 529 | 1,476,460 | 77 | 100 | 28,265 |
| Fall River, Mass | 1928 | 72 | 51,500 | | | 81 | 79,290 | 153 | 130,790 | 315 | 822,281 | 82 | | |
| | 1929 | 87 | 36,813 | | | 68 | 52,282 | 155 | 89,095 | 291 | 273,390 | 85 | | |
| Flint, Mich | 1928 | 986 | 343,884 | | | 342 | 192,375 | 1,328 | 536,559 | 3,409 | 6,707,359 | 43 | 1,702 | 2,928 |
| | 1929 | 1,004 | 325,320 | | | 366 | 551,715 | 1,370 | 877,035 | 3,260 | 6,606,687 | 40 | | |
| Fort Wayne, Ind | 1928 | 170 | 105,007 | | | 65 | 271,487 | 235 | 376,494 | 861 | 2,215,971 | 71 | | |
| | 1929 | 153 | 93,050 | 2 | 4,000 | 60 | 758,212 | 215 | 855,262 | 914 | 2,995,596 | 61 | | |
| Fort Worth, Tex | 1928 | 845 | 483,576 | 231 | 82,130 | 196 | 90,462 | 1,272 | 656,168 | 2,844 | 9,327,435 | 29 | | |
| | 1929 | 875 | 410,571 | 177 | 202,843 | | | 1,052 | 613,414 | 1,934 | 6,373,944 | 42 | 44 | 20,728 |
| Grand Rapids, Mich | 1928 | 1,286 | 317,445 | | | 192 | 688,330 | 1,478 | 1,005,775 | 2,753 | 4,350,470 | 51 | 224 | 40,025 |
| | 1929 | 1,150 | 281,555 | | | 58 | 238,650 | 1,208 | 520,205 | 2,393 | 3,218,050 | 58 | 224 | 43,265 |
| Hartford, Conn | 1928 | 342 | 211,398 | | | 206 | 806,020 | 548 | 1,017,418 | 1,001 | 5,945,547 | 46 | 230 | 142,681 |
| | 1929 | 311 | 364,506 | | | 317 | 1,917,456 | 628 | 2,281,962 | 879 | 11,855,414 | 21 | 198 | 119,968 |
| Houston, Tex | 1928 | 863 | 162,877 | | | 47 | 94,620 | 910 | 257,497 | 3,415 | 18,695,541 | 14 | | |
| | 1929 | | | | | | | 1,023 | 472,670 | 2,874 | 18,252,723 | 10 | | |
| Indianapolis, Ind | 1928 | | | | | | | 2,813 | 1,210,527 | 5,234 | 11,093,174 | 23 | 336 | 402,699 |
| | 1929 | | | | | | | 2,002 | 885,495 | 3,501 | 8,007,526 | 30 | 553 | 324,834 |
| Jacksonville, Fla | 1928 | 525 | 233,620 | | | 243 | 168,685 | 768 | 402,305 | 1,903 | 4,645,680 | 49 | 316 | 55,986 |
| | 1929 | 472 | 160,190 | | | 254 | 375,445 | 726 | 535,635 | 1,357 | 2,822,600 | 63 | 520 | 89,704 |
| Jersey City, N. J | 1928 | 57 | 193,900 | | | 317 | 282,255 | 374 | 476,155 | 676 | 6,105,073 | 45 | 14 | 80,400 |
| | 1929 | 161 | 206,399 | | | 199 | 341,935 | 360 | 548,334 | 868 | 10,058,739 | 25 | 235 | 24,876 |
| Kansas City, Kans | 1928 | | | | | | | 222 | 53,025 | 556 | 971,795 | 80 | | |
| | 1929 | | | | | | | 154 | 32,410 | 422 | 896,185 | 82 | 94 | 10,450 |
| Kansas City, Mo | 1928 | 231 | 176,700 | 58 | 53,600 | 181 | 206,125 | 470 | 436,425 | 1,370 | 8,404,100 | 36 | 289 | 131,600 |
| | 1929 | | | | | | | 331 | 445,350 | 1,108 | 6,056,400 | 43 | 129 | 31,050 |
| Knoxville, Tenn | 1928 | 344 | 77,298 | | | 136 | 102,063 | 480 | 179,361 | 1,154 | 3,346,358 | 58 | 26 | 11,124 |
| | 1929 | 116 | 35,180 | | | 107 | 58,657 | 223 | 93,837 | 758 | 3,092,722 | 60 | 25 | 46,378 |
| Long Beach, Calif | 1928 | 379 | 168,820 | | | 282 | 210,735 | 661 | 379,555 | 2,451 | 6,875,235 | 40 | 315 | 39,005 |
| | 1929 | | | | | | | 642 | 350,190 | 2,627 | 11,743,155 | 22 | 340 | 52,725 |
| Los Angeles, Calif | 1928 | | | | | | | 6,433 | 5,217,691 | 17,392 | 52,002,570 | 5 | | |
| | 1929 | | | | | | | 6,548 | 6,400,791 | 16,012 | 54,071,599 | 5 | | |
| Louisville, Ky | 1928 | 97 | 53,825 | 2 | 105,000 | 378 | 1,010,920 | 477 | 1,169,745 | 1,683 | 9,017,055 | 30 | 5,309 | 1,492,089 |
| | 1929 | 331 | 94,965 | | | 84 | 807,625 | 415 | 902,590 | 1,431 | 7,953,405 | 31 | 4,621 | 1,439,414 |
| Lowell, Mass | 1928 | 152 | 72,710 | | | 70 | 90,545 | 222 | 163,255 | 324 | 408,940 | 84 | | |
| | 1929 | 131 | 41,980 | 1 | 2,500 | 97 | 194,755 | 229 | 239,235 | 341 | 419,650 | 83 | | |
| Lynn, Mass | 1928 | 199 | 169,500 | | | 77 | 421,540 | 276 | 591,040 | 612 | 2,070,663 | 74 | | |
| | 1929 | 194 | 145,643 | | | 93 | 680,825 | 287 | 826,468 | 599 | 2,536,381 | 66 | | |
| Memphis, Tenn | 1928 | | | | | | | 1,082 | 1,109,750 | 2,275 | 7,589,045 | 37 | 500 | 573,233 |
| | 1929 | | | | | | | 765 | 748,423 | 1,683 | 4,590,496 | 50 | 621 | 735,854 |
| Miama, Fla | 1928 | 253 | 222,355 | 9 | 2,650 | 191 | 118,778 | 453 | 343,783 | 889 | 1,258,824 | 79 | 427 | 75,689 |
| | 1929 | 450 | 149,505 | | | 327 | 247,240 | 777 | 396,745 | 1,074 | 1,898,508 | 70 | 329 | 95,916 |

[1] For years in which figures are not shown total repairs, etc., only were reported.

TABLE 7.—NUMBER AND ESTIMATED COST OF BUILDINGS (NEW CONSTRUCTION, AND REPAIRS, ALTERATIONS, AND ADDITION TO OLD BUILDINGS) COVERED BY PERMITS ISSUED IN THE FIRST HALF OF 1928 AND OF 1929, BY INTENDED USE OF BUILDINGS—Continued

PART 3.—REPAIRS, ALTERATIONS, AND ADDITIONS TO OLD BUILDINGS, AND GRAND TOTAL OF ALL PERMITS—Continued

| City and State | First half of each year | Repairs, etc., on residential buildings | | | | Repairs, etc., on nonresidential buildings | | Total repairs, etc. | | Grand total of all permits for new construction and repairs, etc. | | Rank in cost of construction | Installation permits | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Housekeeping dwellings | | Nonhousekeeping dwellings | | | | | | | | | | |
| | | Number | Cost | Number | Cost | Number | Cost | Number | Cost | Number | Cost | | Number | Cost |
| Milwaukee, Wis | 1928 | | | | | | | 1,192 | $1,863,858 | 3,781 | $13,417,507 | 18 | 11,909 | $4,824,395 |
| | 1929 | | | | | | | 1,380 | 3,213,912 | 3,884 | 16,289,312 | 14 | 12,276 | 4,253,557 |
| Minneapolis, Minn | 1928 | | | | | | | 1,274 | 1,762,170 | 3,318 | 10,165,375 | 24 | | |
| | 1929 | | | | | | | 1,171 | 2,376,430 | 2,820 | 14,426,185 | 17 | | |
| Nashville, Tenn | 1928 | | | | | | | 524 | 266,582 | 1,007 | 3,090,222 | 61 | 169 | 143,213 |
| | 1929 | | | | | | | 751 | 669,333 | 1,165 | 3,710,460 | 55 | 105 | 11,536 |
| Newark, N. J | 1928 | 388 | $703,926 | | | 200 | $2,771,952 | 588 | 3,475,878 | 1,540 | 18,643,297 | 16 | 634 | 1,675,599 |
| | 1929 | 393 | 764,810 | | | 259 | 1,912,810 | 652 | 2,677,620 | 1,418 | 12,990,016 | 19 | 777 | 950,232 |
| New Bedford, Mass | 1928 | 146 | 99,720 | | | 79 | 104,725 | 225 | 204,445 | 379 | 568,745 | 83 | | |
| | 1929 | 139 | 57,590 | | | 56 | 39,085 | 195 | 96,675 | 321 | 355,740 | 84 | | |
| New Haven, Conn | 1928 | 141 | 155,000 | | | 198 | 362,000 | 339 | 517,000 | 648 | 4,001,800 | 55 | 159 | 63,000 |
| | 1929 | 142 | 394,213 | | | 187 | 173,847 | 329 | 568,060 | 646 | 4,178,732 | 51 | 235 | 33,147 |
| New Orleans, La | 1928 | 423 | 789,965 | | | 308 | 1,076,068 | 731 | 1,866,033 | 1,615 | 5,835,826 | 47 | | |
| | 1929 | 289 | 586,720 | | | 195 | 579,350 | 484 | 1,166,070 | 1,130 | 7,612,786 | 35 | | |
| New York, N. Y.: | | | | | | | | | | | | | | |
| The Bronx | 1928 | 246 | 724,250 | | | 2,905 | 2,962,725 | 3,151 | 3,686,975 | 6,106 | 122,816,699 | | 1,357 | 480,326 |
| | 1929 | 250 | 888,350 | | | 1,983 | 2,834,300 | 2,233 | 3,722,650 | 4,095 | 70,704,500 | | | |
| Brooklyn | 1928 | 2,264 | 3,186,890 | 25 | $2,079,900 | 873 | 3,631,945 | 3,162 | 8,898,735 | 9,889 | 111,492,155 | | | |
| | 1929 | 2,311 | 2,595,335 | 26 | 77,550 | 892 | 5,766,440 | 3,229 | 8,439,325 | 7,610 | 104,054,444 | | | |
| Manhattan | 1928 | 754 | 4,032,832 | 187 | 10,778,760 | 649 | 8,901,705 | 1,590 | 23,713,297 | 2,261 | 223,154,177 | 1 | | |
| | 1929 | 636 | 4,241,640 | 126 | 7,559,700 | 691 | 15,880,181 | 1,453 | 27,681,521 | 2,107 | 447,442,921 | | | |
| Queens | 1928 | 1,091 | 645,280 | | | 486 | 2,055,095 | 1,577 | 2,700,375 | 12,138 | 92,285,118 | | | |
| | 1929 | 1,070 | 783,539 | | | 706 | 3,328,474 | 1,776 | 4,112,013 | 8,514 | 66,218,126 | | | |
| Richmond | 1928 | 275 | 196,655 | | | 186 | 171,828 | 461 | 368,483 | 1,819 | 7,813,742 | | | |
| | 1929 | 269 | 236,658 | | | 200 | 307,896 | 469 | 544,554 | 1,560 | 5,698,073 | | | |
| Norfolk, Va | 1928 | 177 | 93,415 | | | 99 | 117,880 | 276 | 211,295 | 742 | 2,537,293 | 67 | 206 | 30,083 |
| | 1929 | 141 | 72,730 | | | 107 | 192,835 | 248 | 265,565 | 632 | 1,634,493 | 76 | 163 | 25,565 |
| Oakland, Calif | 1928 | | | | | | | 1,066 | 984,109 | 2,541 | 11,437,519 | 22 | 563 | 89,333 |
| | 1929 | | | | | | | 1,021 | 1,005,590 | 2,123 | 7,705,590 | 34 | 223 | 52,927 |
| Oklahoma City, Okla | 1928 | 209 | 116,185 | 2 | 6,000 | 74 | 516,982 | 285 | 639,167 | 2,474 | 7,472,955 | 38 | 49 | 9,777 |
| | 1929 | 242 | 120,705 | 1 | 416,000 | 54 | 115,345 | 297 | 652,050 | 2,709 | 9,981,140 | 26 | 154 | 40,570 |
| Omaha, Nebr | 1928 | 76 | 48,202 | | | 66 | 275,880 | 142 | 324,082 | 578 | 2,704,468 | 64 | | |
| | 1929 | 79 | 62,865 | | | 70 | 251,305 | 149 | 314,170 | 554 | 2,357,952 | 67 | 13 | 95,800 |
| Paterson, N. J | 1928 | | | | | | | 755 | 366,949 | 1,125 | 3,154,285 | 60 | 11 | 2,140 |
| | 1929 | | | | | | | 698 | 619,796 | 1,029 | 2,874,284 | 62 | 25 | 21,575 |

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Philadelphia, Pa | 1928 | 2,468 | 2,883,240 | | | 866 | 4,324,860 | 3,334 | 7,208,100 | 9,279 | 63,195,840 | 4 | 157 | 48,165 |
| | 1929 | | | | | | | 2,286 | 4,625,230 | 6,128 | 58,533,385 | 3 | 1,581 | 951,815 |
| Pittsburgh, Pa | 1928 | 1,494 | 1,029,339 | 79 | 365,470 | 290 | 1,097,123 | 1,863 | 2,491,932 | 3,769 | 25,101,750 | 8 | | |
| | 1929 | 1,222 | 1,353,656 | | | 262 | 1,106,881 | 1,484 | 2,460,537 | 3,040 | 17,828,478 | 12 | | |
| Portland, Oreg | 1928 | 1,860 | 714,410 | | | 554 | 850,800 | 2,414 | 1,565,210 | 5,049 | 12,240,640 | 20 | | |
| | 1929 | 1,603 | 600,485 | | | 534 | 800,000 | 2,137 | 1,400,485 | 3,816 | 8,603,730 | 27 | | |
| Providence, R. I | 1928 | 1,225 | 640,120 | | | 306 | 930,425 | 1,531 | 1,570,545 | 2,510 | 8,946,219 | 33 | | |
| | 1929 | 1,329 | 620,250 | | | 299 | 1,296,850 | 1,628 | 1,917,100 | 2,413 | 7,793,700 | 32 | 374 | 5,200 |
| Reading, Pa | 1928 | 656 | 201,190 | 2 | 4,600 | 127 | 234,268 | 785 | 440,058 | 1,140 | 1,822,217 | 78 | 28 | 10,839 |
| | 1929 | 584 | 149,088 | 2 | 17,200 | 252 | 280,264 | 838 | 446,552 | 1,164 | 4,049,183 | 52 | 45 | 17,275 |
| Richmond, Va | 1928 | 278 | 146,621 | 4 | 2,390 | 224 | 459,944 | 506 | 608,755 | 1,290 | 4,351,949 | 50 | | |
| | 1929 | 285 | 141,857 | 6 | 2,950 | 164 | 291,368 | 455 | 436,175 | 1,126 | 6,933,446 | 37 | | |
| Rochester, N. Y | 1928 | 407 | 314,645 | | | 426 | 481,384 | 833 | 796,029 | 2,285 | 9,981,355 | 26 | | |
| | 1929 | 336 | 160,210 | | | 442 | 1,147,953 | 778 | 1,308,163 | 1,848 | 8,239,440 | 29 | | |
| St. Louis, Mo | 1928 | 1,972 | 1,027,560 | 19 | 104,868 | 663 | 1,699,228 | 2,654 | 2,831,656 | 6,831 | 21,562,051 | 12 | | |
| | 1929 | 788 | 387,702 | 6 | 42,220 | 515 | 1,272,466 | 1,309 | 1,702,388 | 4,363 | 15,723,135 | 15 | | |
| St. Paul, Minn | 1928 | 798 | 192,940 | | | 520 | 648,000 | 1,318 | 840,940 | 2,485 | 3,711,748 | 57 | 24 | 24,032 |
| | 1929 | | | | | | | 1,724 | 1,523,213 | 2,717 | 4,908,050 | 49 | 55 | 175,674 |
| Salt Lake City, Utah | 1928 | 113 | 74,850 | | | 93 | 184,483 | 206 | 259,333 | 618 | 2,118,987 | 72 | | |
| | 1929 | 77 | 56,835 | | | 70 | 610,130 | 147 | 666,965 | 553 | 3,359,501 | 57 | | |
| San Antonio, Tex | 1928 | | | | | | | 708 | 810,165 | 2,414 | 9,715,144 | 27 | | |
| | 1929 | 767 | 744,007 | | | 50 | 246,290 | 817 | 990,297 | 2,173 | 11,211,703 | 23 | 4 | 1,865 |
| San Diego, Calif | 1928 | | | | | | | 1,209 | 453,928 | 2,738 | 6,848,619 | 42 | 400 | 113,551 |
| | 1929 | | | | | | | 882 | 416,672 | 1,972 | 5,320,925 | 47 | 361 | 90,625 |
| San Francisco, Calif | 1928 | 1,163 | 777,438 | 13 | 83,766 | 249 | 1,116,144 | 1,425 | 1,977,348 | 3,179 | 18,860,311 | 13 | 624 | 136,671 |
| | 1929 | 1,127 | 670,957 | 56 | 371,250 | 610 | 1,084,991 | 1,793 | 2,127,198 | 2,882 | 18,076,778 | 11 | 840 | 143,583 |
| Scranton, Pa | 1928 | | | | | | | 358 | 516,265 | 619 | 2,113,509 | 73 | | |
| | 1929 | | | | | | | 288 | 394,423 | 498 | 1,814,542 | 73 | 53 | 10,900 |
| Seattle, Wash | 1928 | | | | | | | 2,366 | 2,414,425 | 5,080 | 23,389,825 | 10 | | |
| | 1929 | | | | | | | 1,994 | 5,455,890 | 3,997 | 20,508,300 | 8 | | |
| Somerville, Mass | 1928 | 33 | 10,040 | | | 2 | 3,000 | 35 | 13,040 | 60 | 306,060 | 85 | | |
| | 1929 | 137 | 88,365 | | | 83 | 70,985 | 220 | 159,350 | 351 | 1,897,965 | 71 | | |
| Spokane, Wash | 1928 | 291 | 124,161 | 2 | 1,000 | 115 | 422,090 | 408 | 547,251 | 1,170 | 2,762,985 | 63 | | |
| | 1929 | 388 | 160,239 | 3 | 230,400 | 101 | 268,465 | 492 | 659,104 | 1,147 | 2,024,169 | 69 | | |
| Springfield, Mass | 1928 | 71 | 79,962 | 3 | 68,550 | 119 | 326,313 | 193 | 474,825 | 883 | 3,756,854 | 56 | | |
| | 1929 | 103 | 52,550 | 20 | 325,200 | 109 | 367,466 | 232 | 745,216 | 754 | 3,206,681 | 59 | | |
| Syracuse, N. Y | 1928 | 259 | 244,485 | 1 | 8,000 | 122 | 385,465 | 382 | 637,950 | 1,584 | 6,646,775 | 44 | | |
| | 1929 | 242 | 196,530 | 5 | 758,684 | 144 | 413,115 | 391 | 1,368,329 | 1,369 | 6,001,389 | 45 | | |
| Tacoma, Wash | 1928 | | | | | | | 593 | 372,560 | 1,023 | 2,607,085 | 65 | | |
| | 1929 | 471 | 129,825 | | | 149 | 219,165 | 620 | 348,990 | 1,278 | 2,554,735 | 65 | | |
| Tampa, Fla | 1928 | 913 | 171,405 | | | 334 | 119,390 | 1,247 | 290,795 | 2,038 | 1,952,350 | 76 | 71 | 6,060 |
| | 1929 | 694 | 121,314 | | | 331 | 176,617 | 1,025 | 297,931 | 1,398 | 1,354,690 | 79 | 91 | 28,037 |
| Toledo, Ohio | 1928 | | | | | | | 528 | 1,661,995 | 2,563 | 10,079,104 | 25 | | |
| | 1929 | 688 | 453,505 | | | 141 | 767,655 | 829 | 1,221,160 | 2,649 | 6,920,606 | 38 | | |
| Trenton, N. J | 1928 | 158 | 70,673 | | | 85 | 368,440 | 243 | 439,113 | 568 | 2,395,838 | 68 | 1 | 5,000 |
| | 1929 | 129 | 75,485 | | | 59 | 454,613 | 188 | 530,098 | 436 | 1,723,526 | 75 | 1 | 500 |
| Tulsa, Okla | 1928 | 312 | 160,913 | | | 86 | 120,080 | 398 | 280,993 | 2,030 | 6,862,109 | 41 | | |
| | 1929 | 280 | 185,835 | | | 71 | 84,422 | 351 | 270,257 | 1,780 | 6,911,778 | 39 | | |
| Utica, N. Y | 1928 | 84 | 94,245 | 4 | 2,765 | 25 | 56,820 | 113 | 153,830 | 369 | 2,305,040 | 69 | | |
| | 1929 | 58 | 40,185 | | | 39 | 121,600 | 97 | 161,785 | 246 | 1,098,635 | 81 | | |
| Washington, D. C | 1928 | | | | | | | 1,456 | 1,417,217 | 3,181 | 23,735,997 | 9 | 550 | 462,495 |
| | 1929 | | | | | | | 1,323 | 2,058,375 | 3,067 | 38,547,655 | 6 | 1,357 | 817,440 |

TABLE 7.—NUMBER AND ESTIMATED COST OF BUILDINGS (NEW CONSTRUCTION, AND REPAIRS, ALTERATIONS, AND ADDITIONS TO OLD BUILDINGS) COVERED BY PERMITS ISSUED IN THE FIRST HALF OF 1928 AND OF 1929, BY INTENDED USE OF BUILDINGS—Continued

PART 3.—REPAIRS, ALTERATIONS, AND ADDITIONS TO OLD BUILDINGS, AND GRAND TOTAL OF ALL PERMITS—Continued

| City and State | First half of each year * | Repairs, etc., on residential buildings | | | | Repairs, etc., on nonresidential buildings | | Total repairs, etc. | | Grand total of all permits for new construction and repairs, etc. | | Rank in cost of construction | Installation permits | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Housekeeping dwellings | | Nonhousekeeping dwellings | | | | | | | | | | |
| | | Number | Cost | Number | Cost | Number | Cost | Number | Cost | Number | Cost | | Number | Cost |
| Wilmington, Del | 1928 | ---- | ---- | ---- | ---- | ---- | ---- | 394 | $570,084 | 940 | $2,570,806 | 66 | 68 | $35.672 |
| | 1929 | ---- | ---- | ---- | ---- | ---- | ---- | 352 | 515,624 | 793 | 3,786.622 | 54 | 38 | 116,226 |
| Worcester, Mass | 1928 | 227 | $187,621 | ---- | ---- | 258 | $439,348 | 485 | 626,969 | 1,013 | 3,340,134 | 59 | ---- | ---- |
| | 1929 | 220 | 433,630 | ---- | ---- | 290 | 905,832 | 510 | 1,339,462 | 961 | 3,960,430 | 53 | ---- | ---- |
| Yonkers, N. Y | 1928 | 99 | 166,575 | ---- | ---- | 105 | 373,245 | 204 | 539,820 | 1,059 | 22,238,892 | 11 | ---- | ---- |
| | 1929 | 119 | 92,415 | ---- | ---- | 72 | 362,350 | 191 | 454,765 | 828 | 14,876,279 | 16 | ---- | ---- |
| Youngstown, Ohio | 1928 | ---- | ---- | ---- | ---- | ---- | ---- | 156 | 339,290 | 1,149 | 4,053,918 | 53 | ---- | ---- |
| | 1929 | 172 | 58,378 | ---- | ---- | 48 | 106,850 | 220 | 165,228 | 968 | 2,746,132 | 64 | ---- | ---- |
| Total (85 cities) | 1928 | ---- | ---- | ---- | ---- | ---- | ---- | 97,864 | 134,366,471 | 248,731 | 1,551,120,307 | ---- | 35,099 | 19,636,882 |
| | 1929 | ---- | ---- | ---- | ---- | ---- | ---- | 92,535 | 149,038,723 | 211,409 | 1,570,145,411 | ---- | 42,258 | 20,276,746 |

## English Housing Statistics

THE total number of houses completed in 1928–29 in England and Wales, excluding those provided for rehousing purposes in connection with slum clearances, was 169,532, according to the tenth annual report of the Ministry of Health, the department in charge of all housing matters. This was a serious decline, as compared with the previous year, when 238,914 had been finished. It is attributed largely to the reduction in the amount of the Government subsidy after September, 1927. In 1926 notice had been given that the subsidy then current would be paid on all houses completed before October, 1927, but thereafter the subsidy would be reduced by amounts varying according to the act under which it was claimed and the district in which the house to which it applied was built. (See Labor Review, March, 1927, p. 40.) The natural result was that through the first nine months of 1927 housing work was speeded up to get the benefit of the current subsidy, and that it slackened correspondingly when the cut went into effect.

Since the armistice a total of 1,275,000 houses have been built, 829,000 with State assistance and 446,000 without. This latter figure includes an estimate of 30,000 houses built between the armistice and October, 1922, for which period exact statistics are not available.

The following table gives particulars as to the number of houses built yearly since 1922:

HOUSES BUILT IN ENGLAND AND WALES IN SPECIFIED YEARS

| Year | Houses built by private enterprise | | Houses built by local authorities with State assistance | Total |
|---|---|---|---|---|
| | With State assistance | Without State assistance | | |
| 1923–24 | 4,311 | 67,546 | 14,353 | 86,210 |
| 1924–25 | 47,045 | 69,220 | 20,624 | 136,889 |
| 1925–26 | 62,769 | 66,439 | 44,218 | 173,426 |
| 1926–27 | 79,686 | 63,850 | 74,093 | 217,629 |
| 1927–28 | 74,548 | 60,332 | 104,034 | 238,914 |
| 1928–29 | 49,069 | 64,740 | 55,723 | 169,532 |

The State assistance to houses built by private enterprise will be discontinued for all houses not completed by September 30, 1929. Local authorites, however, will have the right to assist the building programs of private enterprise by loans when they consider it advisable to do so. The department suggests that local authorities, while using their own judgment in making such advances, should themselves give particular attention to the provision of houses "which can be let at the lowest possible rents to meet the needs of the lower-paid workers, cooperating but not competing with private enterprise in the provision of houses of the larger and more expensive types."

The total amount of State aid given for housing since the war has been £74,204,633 ($361,376,563) of which £26,000 ($126,620) was spent in erecting demonstration houses, and £20,000 ($97,400) went in grants toward cottages for tuberculous ex-service men. For the year 1928–29 the total amount paid in subsidy was £10,669,974 ($51,962,773).

# VACATIONS WITH PAY

## Vacations with Pay for Workers in Foreign Countries

A REPORT of a study made by the International Federation of Trade Unions, published in its official organ, The International Trade Union Movement, for July-August, 1929,[1] shows that a great advance has been made since the World War in the matter of granting paid vacations to workers, "many countries having either passed legislation enforcing paid holidays or adopted the practice of incorporating clauses providing for paid holidays into collective agreements."

### Legislation

GENERAL legislation establishing vacations with pay for workers exists in Austria, Czechoslovakia, Finland, Latvia, Luxemburg, Poland, and Russia. Brazil is the only country outside of Europe which has such legislation, according to the study. Special legislation providing vacations with pay for specific groups of workers, sometimes in addition to the general legislation on the subject, has been enacted in the following European countries for the occupations specified: Austria (actors, domestic employees, land workers, etc.); Denmark (domestic employees); Finland (commercial employees); Great Britain (shop assistants); Iceland (commercial apprentices); Italy (salaried employees); Spain (seamen); Switzerland (in certain Cantons for industrial and commercial employees, woman workers, domestic employees, apprentices, etc.); and Yugoslavia (workers in State monopolistic enterprises). Outside of Europe legislation of this type is found only in Chile (salaried employees) and in Salvador (salaried employees).

A brief summary of the main provisions of the general legislation, taken from the report under review, is given below:

*Austria.*—Paid holidays for workers [2] in private concerns are regulated by the workers' holidays act of July 30, 1919, which provides for an annual vacation of one week after one consecutive year of service and of two weeks after five years' service. The weekly wage paid during the vacation is that last received, or in the case of piece-workers, the average of the earnings for the last 12 weeks. If a worker's labor contract entitles him to board and lodging, and he does not receive these perquisites during his vacation, he is entitled to a money payment in lieu thereof equivalent to the amount of sick pay he would receive if ill.

Salaried employees in private employment, under the salaried employees' act of May 11, 1921, are entitled to 14 days' vacation

[1] Paid Holidays for Workers and Salaried Employees.
[2] The term worker as used in the report apparently means manual worker.

with pay after 6 months' service, three weeks after 5 years' service, four weeks after 10 years' service, and a month after 25 years' service.

Workers and apprentices under 17 years of age are entitled to two weeks' vacation after one year of service or apprenticeship.

The different Provinces have special land-work regulations which contain clauses dealing with holidays. These clauses differ widely, the only common provision being the requirement of one year's service as the basis for a vacation. In cases of long service the vacation may be from one to three weeks in length.

The domestic employees' act provides for a vacation of one week after one year's service, two weeks after two years' service, and three weeks after five years' service. In addition to the regular wage which is paid during the vacation, the workers also receive a bonus graded according to length of service, thus receiving sometimes one and one-half times, double, or two and one-half times the regular wages. If a domestic worker receives from his employer notice of termination of service, or is unjustly dismissed, he may claim compensation for a vacation if he has served eight months of the year in question. If the worker himself gives notice, however, he forfeits his right to a vacation with pay.

*Czechoslovakia.*—Vacations with pay for workers in private establishments are regulated by the act of April 3, 1925, for the introduction of paid holidays. This act entitles the worker to six days' vacation if he has served from 1 to 10 years; to seven days, if from 10 to 15 years; and to eight days, if over 15 years. Sundays and holidays are counted in the vacation, but wages must be paid for them. The pay received during the vacation is the average of the earnings for the four weeks immediately preceding plus any bonus due under the labor contract.

The above provisions apply also to young workers, with the exception of apprentices, who are entitled to eight days' vacation after six months' consecutive work, Sundays and public holidays being included in the vacation and paid for.

Male and female workers employed in mining "reserved" minerals or in associated undertakings are entitled to vacations with pay, through an act of July 1, 1921, as follows: After 1 to 5 years' service, 5 days; after 5 to 10 years' service, 7 days; after 10 to 15 years' service, 10 days; and after 15 years' service, 12 days.

Salaried employees in private employment, under an act of January 16, 1910, are entitled to a vacation of 10 days with pay after six months' service; of 14 days after five years' service; and of three weeks after 15 years' service. Days of absence on account of sickness or accident must not be deducted from the vacation.

*Finland.*—Under an act of June 1, 1922, workers are entitled to a vacation of four working-days after six months' service and of seven working-days after one year's service. Those who are boarded and lodged by their employers but spend their vacations elsewhere are entitled to compensation for such board and lodging "at the prices customary in the place."

Any agreements restricting the worker's right to a vacation or rest as granted to him under the law are null and void.

*Latvia.*—An act of March 24, 1922, provides for a paid vacation of two weeks for all wage earners and salaried employees, except land workers.

*Luxemburg.*—All wage earners are granted a paid vacation under an act of December 6, 1926, on the following scale: 4 days after 1 year's service; 5 days after 5 years' service; 7 days after 10 years' service; and 12 days after 20 years' service.

Workers and apprentices under 18 years of age are entitled to 7 days' vacation after one year of consecutive service.

The worker is entitled to the same wage throughout his vacation which he was receiving at the beginning of it.

The regulations do not apply to land, vineyard, or forestry workers, nor to seasonal workers, home workers, domestic servants or employees, or workers in concerns employing 20 workers or less, with the exception of workers under 18 years of age and workers in mines and slate quarries.

The employer may require that the working hours which are lost through the compulsory vacation be made up by overtime work, which, however, must not exceed two hours per day or 30 hours per worker per year. This overtime work must be paid for at the increased rates in force for all such work, the increase in no single case to be less than 30 per cent of the usual wage.

*Poland.*—Vacations for all employees of private or public undertakings were fixed by an act of May 16, 1922. This act gives workers 8 days' vacation after one year of consecutive service. Salaried employees receive two weeks' vacation after six months' consecutive service and one month after one year's service. Young workers under 18 are entitled to 14 consecutive days' vacation after one year's service. Persons employed in shops with less than four workers are not entitled to vacations.

*Russia.*—Under the labor code of November 9, 1922, all workers are entitled to a vacation on the basis of at least two weeks per year after five and one-half months' consecutive work. Workers under 18 years of age shall have at least a month's vacation.

*Brazil.*—Salaried employees and workers in trade, industry, and banking concerns, or in charitable or welfare institutions, and the employees of all the departments of newspapers, are entitled after one year's consecutive service to 14 days' vacation with wages, salaries, bonuses, etc., under a decree of October 30, 1926. Any breach of this decree is punishable by a fine of from $50 to $2,000.

In France and in Germany legislation regulating vacations for workers is under consideration. Trade-unions are demanding such regulation in Belgium, Estonia, France, Germany, the Netherlands, and Switzerland, and also the improvement of the existing legislation in Czechoslovakia.

### Collective Agreements

In the countries which have no legislation providing paid vacations for workers in private employment, the practice of granting them is most general in Germany and in Memel, although considerable numbers of workers are given vacations in Denmark, Great Britain, the Netherlands, and Switzerland. In Belgium and in France the number is still comparatively small.

In some countries where vacations are regulated by law the statutory provisions are embodied in collective agreements. In Austria many agreements go beyond the provisions of the law; in Czecho-

slovakia this is true in only a few instances, notably that of the metal industry, and in Latvia only the printing operatives have a longer vacation than that provided by law.

The succeeding paragraphs discuss the provisions made in collective agreements in various countries for vacations for workers (as distinguished from salaried employees) in private employment.

*Austria.*—Trade-unions covering the following occupations in Austria have in their agreements with employers' organizations more liberal vacation provisions than those fixed by law: Men's and women's tailors; furriers, fur dyers, and fur dressers; workers in chemists' shops; workers in hotels, restaurants, and bars; brewery workers; workers in barrel and bottle concerns; employees in jam factories; mill workers; employees in the alcohol industry; workers in the yeast industry; makers of sweets, chocolates, confectionery, ice, and candy; butchers' assistants; wine merchants' laborers; bakery employees; cinema workers; and building workers.

The vacations provided for in these agreements vary from a minimum of three days after 6 months' service (tailors) to a maximum of four weeks after 10 years' service (cinema workers). In several cases a bonus in addition to the vacation pay is granted.

The building-trades workers have what the International Federation of Trade Unions considers a very interesting collective agreement. Since these workers seldom have continuous work, they are rarely eligible for vacations. To enable them to benefit from the law establishing vacations for workers, an agreement was made in 1920 between the union and the employers providing for a so-called "holiday welfare committee." Money compensation drawn from a special fund for the purpose is given in lieu of the vacations. The report describes the arrangement as follows: "If the holiday book records 52 stamps in 18 months, the worker receives as holiday compensation the wage for 48 hours of work. This compensation is scaled down systematically if the worker requires over 18 months to collect the necessary 52 stamps."

About 950,000 workers are covered by the workers' holidays act, and there are in addition about 94,000 domestic workers and 450,000 persons employed in agriculture and forestry (including salaried employees) whose vacations are regulated by various other acts.

*Belgium.*—Vacation agreements are in effect in certain establishments in the textile trades, the building trades (United Cement and Brick Works), a joinery, the printing trade, and the match, carpet, food, diamond, and metal industries. The length of the vacation, where specified in the report, varies from a minimum of 2 days after one year's service, in the carpet industry, to 15 days (length of service not specified) in the printing trade.

*Czechoslovakia.*—In only a few cases are longer vacations provided by collective agreements than those stipulated in the law. According to the report, wherever they are longer the employers are endeavoring to scale them down, the law permitting this procedure. One of the cases in which a longer time is allowed than provided for by law is that of the metal industry, in which the agreement of June 4, 1928, calls for 8 days of paid vacation after one year's service, covering about 45,000 workers.

About 2,300,000 workers come under the statutory provisions regarding vacations.

*Denmark.*—It is reported that 34.3 per cent of the members of trade unions in 1926 were entitled to vacations, the average length of the vacation being 8 days. This included all members of the following unions: Private railway employees, pottery workers, chimney sweeps, cork cutters and sorters, lithographers, chewing-tobacco workers, tobacco workers, bakery and confectionery workers, and sweet makers. Only a fraction of the workers in trades not specified were entitled to vacations.

The period of service required varied, but was usually one year, which gave the right to one week's vacation.

The collective agreement of the metal workers' union and the employers' organization provided for a vacation up to four days without pay.

*France.*—It is reported that apparently the practice of granting vacations in French industry is not at all general. "It may be said to be exceptional, even in those industries in which it occurs most often." A certain number of concerns in the following industries give paid vacations: Food (industry and commerce); chemical; paper, cardboard, and rubber; printing and allied trades; textile; clothing; leather; wood; metal; construction; glass, pottery, and cement; and "commerce, with exception of food." Of the companies included, only 61 employ over 100 persons, 9 employing over 500 and 8 over 1,000.

Some of these establishments give vacations to all of their workers regardless of length of service, but the majority grant them only to workers with a given length of service, ranging from 3 months to 15 years, and a few give them only to workers in certain workshops. In some cases a vacation of a uniform length is given either to all the workers or to those who have served the required period; in others, the time allowed varies according to the period of service. "The most varied arrangements have been adopted and we might almost say that each firm has its own system." The arrangements in regard to vacation pay also vary greatly.

In agreement with the unions, a certain number of establishments in the boot and shoe industry in two localities give their workers a vacation of one week without pay, during which time the factories are closed.

*Germany.*—About nine-tenths of all collective agreements contain clauses providing for vacations, and 8,680,000 workers, or over 90 per cent of the 9,320,000 covered by collective agreements in Germany, are entitled to vacations. In nearly every agreement the length of the vacation is graded according to age and length of service within minimum and maximum limits. On January 1, 1925, the minimum for almost two-thirds of the workers was 3 days; the maximum in about two-thirds of the cases exceeded 6 days. Twelve days were allowed in only 13.7 per cent of the cases and 18 days in only 2.1 per cent.

*Great Britain.*—In many industries general or district agreements provide for vacations with pay, the time allowed for the majority of the workers being 6 days or a week, although in some cases only 2, 3, or 4 days. In some instances the period is 12 days or 2 weeks. The

service requirement is usually a year. The most important unions affiliated with the British Trades Union Congress having collective agreements with vacation clauses are the following: Transport and General Workers' Union; National Federation of Building Trade Operatives; National Union of Distributive and Allied Workers; Amalgamated Engineering Union; Electrical Trades Union; Musicians Union; National Society of Operative Printers and Assistants; National Union of Printing, Bookbinding, Machine Ruling and Paper Workers; National Union of Railwaymen; Scottish Typographical Association; National Amalgamated Union of Shop Assistants, Warehousemen and Clerks; Typographical Association; Amalgamated Society of Woodworkers; Iron and Steel Trades Confederation.

It is estimated that about 1,500,000 workers are entitled to paid vacations under collective agreements. In addition, there are many unions whose members are granted vacations although there is no written agreement on the matter.

*Latvia.*—The collective agreements of certain categories of workers contain clauses relating to vacations, but these usually do not go beyond the statutory provisions. The only workers having vacations longer than those provided by law are the printing operatives, who have two or three days more.

Vacations for about 160,000 workers and salaried employees are regulated in Latvia.

*Memel.*—Collective agreements regulate the matter of vacations for all of the unions affiliated with the national center. The general labor agreement provides that all workers shall be entitled to an annual vacation with pay, which shall amount for each day of the vacation to eight times the hourly wage fixed in the agreement. The length of the vacation ranges from 3 days after 1 year's service to 9 days after 10 years' service.

*Netherlands.*—On June 1, 1927, 109,302 workers, or 41 per cent of the 266,300 covered by collective agreements, had vacations with pay. Figures quoted for 6,490 firms having collective agreements with their 108,936 workers showed that 2,274, with 25,870 workers, granted 1 to 5 days; 4,145, with 77,761 workers, 6 to 11 days; and 71, with 5,305 workers, 12 or more days. The workers included in the first group were mainly in the food and drink trades and the woodworking industry; the second group included miners, printing operatives, bookbinders and paper-mill workers, and workers in the food and drink trades and the clothing industry. The third group consisted almost entirely of seamen of the mercantile marine, with a few clerks and musicians.

Incomplete figures on the number of workers not covered by collective agreements who are granted vacations showed that there were 104,100, the vacations varying from 1 to 14 days per year.

*Poland.*—Vacation provisions in the collective agreements of workers in the tobacco industry (State monopoly) and the naphtha industry are more favorable than the statutory provisions. The workers in these two industries receive 8 days' vacation after 1 year's service, which increases to 21 days after 5 years' service.

The statutory provisions cover about 900,000 workers.

*Sweden.*—Most of the unions affiliated with the national center have regulations regarding paid vacations. The service requirement is

usually one year, although the period fixed by some agreements is shorter, and the time allowed may be from four days to two weeks.

*Switzerland.*—Paid vacations in private industry are based chiefly upon collective agreements. The reports of the factory inspectors for 1926 showed that 141,343 workers covered by the factory act had vacations with pay and that 4,471 more were entitled to vacations without pay. The length of the vacation was from 1 to 12 days. Of the 3,669 factories granting vacations, 1,064 gave them to certain workers only, but 2,605 gave them to their entire force.

In Estonia and in Spain there are no agreements concerning vacations.

## Vacations with Pay for English Wage Earners

IN ENGLAND, as in this country, a number of the agreements between employers' and workers' organizations contain provisions for holidays with pay in addition to the customary public holidays. The Ministry of Labor Gazette gives, in its issue for August, 1929, a list of industries and occupations in which general or district agreements are known to exist providing for holidays with pay. Most of the agreements provide that payment shall be made for public holidays and for a certain additional period, varying from three days to two weeks. A service qualification of from 6 to 12 months is usually required, and in many cases the length of vacation allowed is directly governed by the length of service rendered. The service qualification is sometimes linked with a condition as to attendance, absence without sufficient cause for more than a specified number of days during the qualifying period resulting in a loss of payment for the holiday. The list of industries and occupations in which these agreements are found is a long one, including mining and quarrying, metal industries, textile and clothing industries, food and drink manufactures, transport, public utility services, electricity supply services, and a long list of miscellaneous enterprises, including cooperative societies.

In addition to these general and district agreements, it is known that there are many others covering the employees of individual firms. The trade boards have recommended one week's vacation with pay for employees in the brush and broom trade, and the women's light clothing trade, after one year's service, and the joint industrial council for the cooperage industry has made a similar recommendation. In the sawmill industry the national conciliation board has decided that as from January 1, 1930, a week's holiday with pay shall be granted employees with one year's service in the northeast coast district. Moreover, provision for holidays with pay is recognized by some employers' associations, although not embodied in agreements.

It is often specified that the holiday shall consist of a certain number of consecutive days, and in many cases it is also provided that it shall fall between definite dates in the summer season. Sometimes allowances are specified for employees who leave their employment before having taken their holidays, though in a few instances such allowances are specifically debarred. An interesting variation is

the contributory arrangement made in a few of the agreements for providing the vacation pay.

> In the boot and shoe industry equal contributions are made to a holiday fund by employers and workpeople, the amount being 1s. 2d. [28 cents] per week in the case of adult men, with smaller amounts for women, youths, and girls. Withdrawals of small fixed amounts are made for the Easter and Whitsun holidays, and larger amounts for the longer holidays taken in August and at Christmas. In the lambs wool and worsted yarn spinning industry at Leicester equal contributions are paid by employers and workpeople for 48 weeks in the year, the amount of contribution being 6d. [12 cents] in the case of males over 18, with smaller amounts in respect of women and boys and girls. * * * Another example of a contributory system is found in an agreement covering typefounders in London, who work 49 hours a week, but receive payment for 48 hours only, the extra hour per week, together with another hour per week, being credited to the employees and paid for at all statutory holidays and one full week's holiday.

All the agreements referred to in the article quoted relate to manual workers only, of whom it is estimated that approximately 1,500,000 are covered at present by the provisions for a holiday with pay. In addition to these there are, of course, large numbers of salaried clerks, shop assistants, and other salaried employees, who regularly have holidays with pay.

# WAGES AND HOURS OF LABOR

## Hours and Earnings in Open-hearth Furnaces, Puddling, Plate, and Blooming Mills, 1929

THIS article presents for 1929 data on average earnings per hour, average full-time hours per week, and average full-time earnings per week in four departments of the iron and steel industry—open-hearth furnaces, puddling mills, blooming mills, and plate mills. Similar figures for blast furnaces and Bessemer converters appeared in the September number of the Labor Review. A third article covering other departments will appear in a later issue.

Table 1 shows the number of plants and employees included in 1926 and 1929, also the number of identical plants covered in both years and the number of their employees.

Table 2 shows, for the whole labor force both skilled and unskilled, the averages for 1929 in comparison with similar averages for preceding years in which the bureau made studies. It also contains index numbers, 1913 being used as the base year except in the case of puddling mills, for which 1914 is used as the base year, no data for this department having been collected in 1913.

Table 3 gives comparable figures for 1926 and 1929 for the principal occupations in each of the four departments. Similar figures for earlier years may be found in Bulletin No. 442 of this bureau.

Because of the time and expense involved, all establishments operating in the United States could not be included in the survey. It was necessary to restrict the study to representative establishments, but these have been so selected that the statistics for each department may be accepted as representative of conditions in the industry in the country as a whole.

TABLE 1.—NUMBER OF PLANTS AND EMPLOYEES COVERED, 1926 AND 1929

| Department | Plants covered | | Employees covered | | Identical plants | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Employees | | Per cent of decrease in number of employees, 1929 as compared with 1926 |
| | 1926 | 1929 | 1926 | 1929 | 1926 and 1929 | 1926 | 1929 | |
| Open-hearth furnaces | 31 | 33 | 13,424 | 13,171 | 31 | 13,424 | 12,327 | 8 |
| Puddling mills | 13 | 11 | 2,488 | 1,800 | 11 | 2,197 | 1,800 | 18 |
| Blooming mills | 27 | 30 | 6,188 | 6,266 | 25 | 5,653 | 5,129 | 9 |
| Plate mills | 17 | 17 | 4,202 | 4,024 | 15 | 3,852 | 3,423 | 11 |

The establishments covered in 1929 are for the most part the same ones covered in 1926. However, in a few instances changes were necessary. Some plants were not operating during the pay period desired. This was especially true of puddling mills, in which department the 1929 study covers 11 establishments as compared with 13 in 1926.

In the 1929 study the data were gathered mostly as of the first half of March and cover a 15-day pay period, while the data for 1926 were mostly for the last half of January and covered a 16-day period.

It will be seen in Table 2 that average full-time hours of labor for open-hearth furnaces were 57.7 in 1929 as compared with 57.1 hours in 1926 and 58.0 hours in 1924. Decided reduction in hours took place between 1922 and 1924. The full-time hours in 1929 were only 75 per cent of the full-time hours in 1913, as shown by the index numbers; in other words, between 1913 and 1929 the regular hours of labor in this department decreased 25 per cent.

Average earnings per hour in open-hearth furnaces increased from 67.7 cents in 1926 to 71.4 cents in 1929, which is the highest average earnings per hour for this department since 1913. The increase in the three-year interval was 5 per cent. It will be observed that earnings per hour in 1929 were more than three times the earnings per hour in 1913.

Average full-time weekly earnings in this department increased from $38.66 in 1926 to $41.20 in 1929, due both to increased hourly earnings and increased hours of labor. Because of the great reduction in hours since 1913, earnings per full-time week did not keep up with hourly earnings. In 1929 full-time weekly earnings were more than two and one-fourth times such earnings in 1913.

Average full-time hours per week of employees in puddling mills decreased in 1929 to 50.3 hours, which is 1.8 hours per week less than in 1926.

Average earnings per hour increased from 65.7 cents in 1926 to 68.6 cents in 1929. Average full-time weekly earnings in 1929 were $34.51, which is a slight increase over 1926. The high point in hourly earnings in puddling mills occurred in 1920, but between 1914 and 1929 hourly earnings considerably more than doubled, as shown by the averages and by the index numbers therefor. Average full-time weekly earnings in puddling mills nearly doubled between 1914 and 1929.

In the blooming mills department the average full-time hours per week in 1929 were 55 which is a slight increase over similar figures for 1926. Average hourly earnings show an increase from 62.7 cents in 1926 to 66.6 cents in 1929, an increase of 6 per cent. Average full-time earnings per week increased from $33.98 in 1926 to $36.63 in 1929. As in open-hearth furnaces, full-time hours per week decreased 25 per cent between 1913 and 1929. Earnings per hour were two and one-half times as much in 1929 as in 1913.

The plate mills show the largest increase in full-time hours per week of the four departments presented. The increase was from 55.8 hours in 1926 to 58 hours in 1929. This change was brought about mainly through the increase in customary working time of establishments in the east. In this section some establishments not only increased the

length of time per turn (day), but also increased the number of days per week of plant operation.

Average earnings per hour in plate mills were 63.9 cents in 1929, as compared with 60.6 cents in 1926. The increase in full-time hours per week and average earnings per hour in 1929 over those in 1926 is reflected in average full-time weekly earnings where the figures show an increase of $3.25 between 1926 and 1929. The index numbers and the averages show that earnings per hour were two and one-half times as much in 1929 as in 1913, and that full-time weekly earnings considerably more than doubled in the same period. As in blooming mills and puddling mills, the high point in earnings per hour was in 1920.

TABLE 2.—AVERAGE FULL-TIME HOURS PER WEEK, EARNINGS PER HOUR, AND FULL-TIME EARNINGS PER WEEK, TOGETHER WITH INDEX NUMBERS COMPUTED THEREFROM, FOR ALL EMPLOYEES IN ALL OCCUPATIONS IN FOUR DEPARTMENTS, 1913 TO 1929

| Department and year | Averages | | | Index numbers (1913=100) [1] | | |
|---|---|---|---|---|---|---|
| | Full-time hours per week | Earnings per hour | Full-time weekly earnings | Full-time hours per week | Earnings per hour | Full-time earnings per week |
| Open-hearth furnaces: | | | | | | |
| 1913 | 76.7 | $0.237 | $18.18 | 100 | 100 | 100 |
| 1914 | 74.5 | .237 | 17.66 | 97 | 100 | 97 |
| 1915 | 74.4 | .246 | 18.30 | 97 | 104 | 101 |
| 1920 | 68.7 | .671 | 46.10 | 90 | 283 | 254 |
| 1922 | 70.8 | .480 | 33.98 | 92 | 203 | 187 |
| 1924 | 58.0 | .635 | 36.83 | 76 | 268 | 203 |
| 1926 | 57.1 | .677 | 38.66 | 74 | 286 | 213 |
| 1929 | 57.7 | .714 | 41.20 | 75 | 301 | 227 |
| Puddling mills: | | | | | | |
| 1914 | 53.2 | .328 | 17.45 | 100 | 100 | 100 |
| 1915 | 52.2 | .315 | 16.44 | 98 | 96 | 94 |
| 1920 | 53.9 | .885 | 47.70 | 101 | 270 | 273 |
| 1922 | 52.1 | .496 | 25.84 | 98 | 151 | 148 |
| 1924 | 55.7 | .721 | 40.16 | 105 | 220 | 230 |
| 1926 | 52.1 | .657 | 34.23 | 98 | 200 | 196 |
| 1929 | 50.3 | .686 | 34.51 | 95 | 209 | 198 |
| Blooming mills: | | | | | | |
| 1913 | 73.0 | .265 | 19.35 | 100 | 100 | 100 |
| 1914 | 70.5 | .269 | 18.96 | 97 | 102 | 98 |
| 1915 | 71.0 | .268 | 19.03 | 97 | 101 | 98 |
| 1920 | 67.5 | .659 | 44.48 | 92 | 249 | 230 |
| 1922 | 68.0 | .472 | 32.10 | 93 | 178 | 166 |
| 1924 | 54.6 | .613 | 33.47 | 75 | 231 | 173 |
| 1926 | 54.2 | .627 | 33.98 | 74 | 237 | 176 |
| 1929 | 55.0 | .666 | 36.63 | 75 | 251 | 189 |
| Plate mills: | | | | | | |
| 1913 | 69.9 | .255 | 17.82 | 100 | 100 | 100 |
| 1914 | 69.0 | .258 | 17.80 | 99 | 101 | 100 |
| 1915 | 69.8 | .270 | 18.58 | 98 | 106 | 104 |
| 1920 | 68.8 | .671 | 46.16 | 98 | 263 | 259 |
| 1922 | 66.2 | .476 | 31.51 | 95 | 187 | 177 |
| 1924 | 57.2 | .562 | 32.15 | 82 | 220 | 180 |
| 1926 | 55.8 | .606 | 33.81 | 80 | 238 | 190 |
| 1929 | 58.0 | .639 | 37.06 | 83 | 251 | 208 |

[1] Except for puddling mills, for which 1914=100.

The 1929 open-hearth furnace study covers 33 plants employing 13,171 employees, of whom 7,452 were in the 15 principal occupations presented separately in Table 3. Average full-time hours per week increased in all occupations in 1929 as compared with 1926, except the occupation of stock cranemen, which shows a decrease of 0.5 hour per week. The largest increase in average full-time hours per week is observed in the occupation of mold cappers, where the hours are

55.3 in 1929 as compared with 50.9 in 1926. However, this occupation is found in only six plants in 1929 and represents but a small percentage of the total employees. While some few employees had a full-time week of 84 hours, the prevailing hours were between 48 and 60.

Average earnings per hour increased in 1929 as compared with 1926 in all occupations but that of locomotive engineers, in which case earnings decreased from 77.2 cents in 1926 to 76.2 cents in 1929. Average full-time weekly earnings increased in all of the 15 principal occupations when 1929 is compared with 1926. The largest increase is found in the occupation of mold cappers, followed by melters' first helpers.

In puddling mills,the average full-time hours per week in 1929 as compared with 1926 show decreases in 10 of the 17 principal occupations, increases in 6, and no change in 1. However, the increases took place in the occupations having the lesser number of employees. Only one of these occupations had any employees with an 84-hour week. The greater percentage had a week of between 48 and 60 hours.

Average earnings per hour show increases in 12 and decreases in 5 occupations, the greatest increase being in the small occupation of heaters and the greatest decrease in the occupation of shearmen's helpers, the change in the latter being mainly caused by the change in number of plants which reported this occupation in 1926 and 1929, and not to any great extent by any change in wages in the several reporting plants. Average full-time weekly earnings when 1929 is compared with 1926 show decreases in 9 occupations and increases in 8. Some occupations which show increases in average earnings per hour show decreases in average full-time weekly earnings, due to decreases in average full-time hours per week.

Data are presented for 12 principal occupations in blooming mills, of which 11 show increases in full-time hours per week when 1929 is compared with 1926. The occupation of bottom makers' helpers is the only one which shows a decrease in average full-time hours per week. In 1926 only two selected occupations had any employees for whom the working time was as many as 84 hours per week, while in 1929 there were 11 occupations in which some employees had an 84-hour week. The great majority of the workers had a week of less than 60 hours. Average earnings per hour increased in 11 occupations, heaters' helpers being the only one which shows a decrease. The highest average hourly earning in 1929 is found in the occupation of rollers, whose hourly earnings were $1.542 as compared with $1.498 in 1926. Laborers had an average hourly earning of 46.3 cents in 1929 as compared with 45.1 cents in 1926. Average full-time weekly earnings range from $82.34 for rollers to $26.39 for laborers, and in all cases weekly earnings in 1929 are higher than those for 1926.

Of the 16 principal occupations for plate mills, 13 had an increase in average full-time hours per week in 1929 as compared with 1926. Two occupations, roll engineers and screwmen, main rolls, universal mills, covering 48 employees, show a decrease, while the occupation of heaters' helpers, covering 92 employees, shows no change. These average full-time hours range from 55.4 for screwmen, main rolls, universal mills, to 63 for screwmen, sheared plate mills. As before

stated, these increases in average full-time hours per week were due in a great part to the change in working time in plants located in the East. A very considerable part of the employees had a week of 60 hours or over.

Average earnings per hour increased in 10 occupations and decreased in the remaining 6. Rollers in sheared plate mills have an average hourly earning in 1929 of $1.595 as compared with $1.364 in 1926. This is the highest-paid occupation in this department, while laborers, with average hourly earnings in 1929 of 40.9 cents as compared with 42.5 cents in 1926, receive the lowest rate of the 16 principal occupations. Average full-time weekly earnings in 1929 when compared with like figures for 1926 show increases in 13 occupations and decreases in 3. Of the three occupations which show decreases in weekly earnings, that of rollers in universal mills is the greatest, the average for 1929 being $75.01 as compared with $77.86 in 1926. The largest increase is found in the occupation of rollers in sheared plate mills, whose weekly earnings in 1929 were $97.30, or $19.55 greater than they were in 1926.

TABLE 3.—AVERAGE CUSTOMARY FULL-TIME HOURS PER WEEK, AVERAGE EARNINGS PER HOUR, AND AVERAGE FULL-TIME WEEKLY EARNINGS OF PRINCIPAL OCCUPATIONS IN THE IRON AND STEEL INDUSTRY, 1926 AND 1929

*Open-hearth furnaces*

| Occupation | Year | Number of plants | Number of employees | Average full-time hours per week | Average earnings per hour | Average full-time weekly earnings | Per cent of employees whose average full-time hours per week were— | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | 48 and under | Over 48 and under 60 | 60 | Over 60 and under 72 | 72 | Over 72 and under 84 | 84 |
| Stockers | 1926 | 30 | 687 | 57.8 | $0.535 | $30.92 | 13 | 71 | ---- | 2 | 4 | 3 | 7 |
| | 1929 | 32 | 659 | 57.9 | .560 | 32.42 | 8 | 74 | 5 | 3 | 1 | 2 | 7 |
| Stock cranemen | 1926 | 28 | 220 | 57.5 | .682 | 39.22 | 9 | 77 | (1) | 2 | 4 | 4 | 4 |
| | 1929 | 30 | 254 | 57.0 | .706 | 40.24 | 10 | 81 | ---- | 2 | 2 | 2 | 4 |
| Charging-machine operators | 1926 | 31 | 221 | 55.7 | .951 | 52.97 | 10 | 83 | ---- | ---- | 3 | 2 | 2 |
| | 1929 | 33 | 256 | 56.2 | .958 | 53.84 | 9 | 85 | ---- | ---- | 1 | 3 | 2 |
| Door operators | 1926 | 17 | 222 | 54.9 | .374 | 20.53 | 19 | 76 | ---- | ---- | 3 | ---- | 2 |
| | 1929 | 15 | 219 | 55.2 | .433 | 23.90 | 5 | 93 | ---- | ---- | ---- | ---- | 2 |
| Melters' helpers, first | 1926 | 31 | 924 | 55.3 | 1.170 | 64.70 | 9 | 86 | ---- | ---- | 2 | 3 | ---- |
| | 1929 | 33 | 980 | 55.9 | 1.247 | 69.71 | 6 | 92 | ---- | ---- | ---- | 2 | 1 |
| Melters' helpers, second | 1926 | 31 | 923 | 55.0 | .827 | 45.49 | 11 | 84 | ---- | 2 | (1) | 3 | ---- |
| | 1929 | 33 | 984 | 55.8 | .886 | 49.44 | 7 | 91 | ---- | ---- | 1 | 2 | ---- |
| Melters' helpers, third | 1926 | 31 | 1,161 | 55.2 | .630 | 34.72 | 10 | 83 | ---- | 1 | 3 | 1 | 3 |
| | 1929 | 33 | 1,026 | 55.6 | .687 | 38.20 | 5 | 92 | ---- | ---- | 1 | 1 | 1 |
| Stopper setters | 1926 | 25 | 119 | 54.4 | .860 | 46.78 | 18 | 79 | ---- | ---- | 2 | ---- | 2 |
| | 1929 | 27 | 121 | 56.2 | .870 | 48.89 | 2 | 93 | ---- | ---- | 2 | ---- | 2 |
| Steel pourers | 1926 | 31 | 148 | 55.6 | .889 | 49.43 | 16 | 75 | ---- | ---- | 3 | 3 | 3 |
| | 1929 | 33 | 159 | 56.3 | .927 | 52.19 | 6 | 88 | ---- | ---- | 3 | 2 | 1 |
| Mold cappers | 1926 | 7 | 70 | 50.9 | .620 | 31.56 | 59 | 41 | ---- | ---- | ---- | ---- | ---- |
| | 1929 | 6 | 49 | 55.3 | .673 | 37.22 | 8 | 92 | ---- | ---- | ---- | ---- | ---- |
| Ladle cranemen | 1926 | 28 | 239 | 54.9 | .900 | 49.41 | 21 | 75 | ---- | ---- | 2 | 2 | 2 |
| | 1929 | 30 | 257 | 55.8 | .941 | 52.51 | 5 | 92 | ---- | ---- | 1 | 2 | 1 |
| Ingot strippers | 1926 | 26 | 126 | 56.0 | .767 | 42.95 | 8 | 85 | ---- | ---- | 2 | 3 | 2 |
| | 1929 | 28 | 116 | 57.3 | .831 | 47.62 | 3 | 89 | ---- | ---- | 2 | 5 | 2 |
| Engineers, locomotive | 1926 | 28 | 363 | 54.7 | .772 | 42.23 | 20 | 73 | (1) | 3 | 2 | 1 | 2 |
| | 1929 | 30 | 389 | 56.1 | .762 | 42.75 | 6 | 86 | 3 | 2 | 1 | 1 | 2 |
| Switchmen | 1926 | 28 | 413 | 54.8 | .616 | 33.76 | 22 | 71 | (1) | 1 | 2 | 1 | 3 |
| | 1929 | 30 | 435 | 54.9 | .645 | 35.41 | 6 | 87 | 3 | (1) | ---- | 1 | 3 |
| Laborers | 1926 | 30 | 1,537 | 59.2 | .429 | 25.40 | 22 | 25 | 14 | 33 | ---- | 6 | 1 |
| | 1929 | 33 | 1,548 | 60.5 | .433 | 26.20 | 9 | 31 | 15 | 44 | ---- | (1) | 1 |

[1] Less than 1 per cent.

TABLE 3.—AVERAGE CUSTOMARY FULL-TIME HOURS PER WEEK, AVERAGE EARNINGS PER HOUR, AND AVERAGE FULL-TIME WEEKLY EARNINGS OF PRINCIPAL OCCUPATIONS IN THE IRON AND STEEL INDUSTRY, 1926 AND 1929—Continued

*Puddling mills*

| Occupation | Year | Number of plants | Number of employees | Average full-time hours per week | Average earnings per hour | Average full-time weekly earnings | Per cent of employees whose average full-time hours per week were— | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | 48 and under | Over 48 and under 60 | 60 | Over 60 and under 72 | 72 | Over 72 and under 84 | 84 |
| Stockers | 1926 | 13 | 134 | 51.1 | $0.527 | $26.93 | 28 | 55 | 13 | 3 | ---- | ----- | --- |
| | 1929 | 11 | 86 | 51.1 | .524 | 26.78 | 19 | 63 | 15 | ----- | 3 | ----- | --- |
| Puddlers | 1926 | 8 | 185 | 53.5 | .767 | 41.03 | 2 | 97 | ---- | ----- | ---- | ----- | --- |
| | 1929 | 7 | 169 | 52.1 | .784 | 40.85 | 7 | 93 | ---- | ----- | ---- | ----- | --- |
| Puddlers, level handed | 1926 | 11 | 922 | 49.3 | .877 | 43.24 | 52 | 47 | ---- | ----- | ---- | ----- | --- |
| | 1929 | 9 | 702 | 46.3 | .880 | 40.74 | 55 | 45 | ---- | ----- | ---- | ----- | --- |
| Puddler's helpers | 1926 | 8 | 200 | 53.4 | .517 | 27.61 | 2 | 99 | ---- | ----- | ---- | ----- | --- |
| | 1929 | 8 | 191 | 51.7 | .519 | 26.83 | 12 | 88 | ---- | ----- | ---- | ----- | --- |
| Heaters | 1926 | 4 | 12 | 54.2 | 1.236 | 66.99 | ----- | 100 | ---- | ----- | ---- | ----- | --- |
| | 1929 | 3 | 5 | 50.8 | 1.374 | 69.80 | ----- | 100 | ---- | ----- | ---- | ----- | --- |
| Heaters helpers | 1926 | 4 | 14 | 54.3 | .595 | 32.31 | ----- | 92 | 7 | ----- | ---- | ----- | --- |
| | 1929 | 2 | 4 | 52.9 | .611 | 32.32 | ----- | 100 | ---- | ----- | ---- | ----- | --- |
| Bloom boys | 1926 | 9 | 20 | 51.2 | .531 | 27.19 | 25 | 70 | 5 | ----- | ---- | ----- | --- |
| | 1929 | 10 | 21 | 51.3 | .479 | 24.57 | 33 | 62 | 5 | ----- | ---- | ----- | --- |
| Roll engineers | 1926 | 10 | 20 | 62.3 | .574 | 35.76 | 30 | 10 | 25 | ----- | 15 | 10 | 10 |
| | 1929 | 9 | 16 | 62.1 | .540 | 33.53 | 31 | 6 | 25 | 13 | ---- | 13 | 13 |
| Rollers | 1926 | 11 | 24 | 50.9 | 1.200 | 61.08 | 33 | 63 | 4 | ----- | ---- | ----- | --- |
| | 1929 | 9 | 19 | 51.7 | 1.235 | 63.85 | 25 | 70 | 5 | ----- | ---- | ----- | --- |
| Roughers | 1926 | 9 | 32 | 48.7 | .748 | 36.43 | 41 | 53 | 6 | ----- | ---- | ----- | --- |
| | 1929 | 8 | 23 | 48.1 | .753 | 36.22 | 48 | 43 | 9 | ----- | ---- | ----- | --- |
| Catchers | 1926 | 11 | 41 | 50.9 | .698 | 35.53 | 24 | 73 | 2 | ----- | ---- | ----- | --- |
| | 1929 | 11 | 30 | 50.4 | .806 | 40.62 | 33 | 63 | 3 | ----- | ---- | ----- | --- |
| Hook-ups | 1926 | 12 | 43 | 50.1 | .539 | 27.00 | 30 | 67 | 2 | ----- | ---- | ----- | --- |
| | 1929 | 10 | 28 | 52.3 | .541 | 28.29 | 14 | 79 | 7 | ----- | ---- | ----- | --- |
| Roll hands, other | 1926 | 4 | 6 | 51.9 | .439 | 22.78 | 33 | 33 | 33 | ----- | ---- | ----- | --- |
| | 1929 | 3 | 5 | 55.3 | .479 | 26.49 | 40 | 40 | 20 | ----- | ---- | ----- | --- |
| Hot-bed men | 1926 | 10 | 65 | 51.2 | .539 | 27.60 | 23 | 71 | 6 | ----- | ---- | ----- | --- |
| | 1929 | 9 | 45 | 50.9 | .572 | 29.11 | 24 | 73 | 2 | ----- | ---- | ----- | --- |
| Shearmen | 1926 | 12 | 23 | 52.8 | .638 | 33.69 | 31 | 51 | 17 | ----- | ---- | ----- | --- |
| | 1929 | 10 | 16 | 54.1 | .573 | 31.00 | 13 | 69 | 19 | ----- | ---- | ----- | --- |
| Laborers | 1926 | 12 | 151 | 57.1 | .357 | 20.38 | 3 | 50 | 44 | 1 | 2 | ----- | --- |
| | 1929 | 9 | 78 | 54.5 | .389 | 21.20 | ----- | 72 | 26 | ----- | 3 | ----- | --- |
| Shearmen's helpers | 1926 | 13 | 54 | 50.6 | .588 | 29.75 | 52 | 36 | 13 | ----- | ---- | ----- | --- |
| | 1929 | 10 | 28 | 54.0 | .464 | 25.06 | 7 | 75 | 14 | 4 | ---- | ----- | --- |

*Blooming mills*

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pit cranemen | 1926 | 27 | 201 | 54.3 | $0.855 | $46.43 | 24 | 59 | ---- | 12 | ---- | 2 | 2 |
| | 1929 | 30 | 217 | 55.4 | .919 | 50.91 | 13 | 70 | ---- | 13 | 1 | ----- | 2 |
| Heaters | 1926 | 27 | 122 | 54.4 | 1.244 | 67.67 | 11 | 76 | ---- | 10 | 1 | 1 | 1 |
| | 1929 | 30 | 151 | 54.9 | 1.358 | 74.55 | 13 | 75 | ---- | 8 | 1 | ----- | 2 |
| Heaters' helpers | 1926 | 18 | 81 | 54.9 | .864 | 47.43 | 7 | 78 | 2 | 7 | ---- | 5 | --- |
| | 1929 | 18 | 79 | 56.4 | .853 | 48.11 | 9 | 75 | ---- | 9 | ---- | ----- | 8 |
| Bottom makers | 1926 | 25 | 128 | 53.9 | .791 | 42.63 | 26 | 54 | ---- | 15 | ---- | 5 | --- |
| | 1929 | 29 | 136 | 54.0 | .860 | 46.44 | 18 | 65 | 1 | 10 | 1 | ----- | 3 |
| Bottom makers' helpers | 1926 | 21 | 171 | 54.4 | .634 | 34.49 | 28 | 45 | ---- | 23 | ---- | 4 | --- |
| | 1929 | 25 | 164 | 53.7 | .663 | 35.60 | 28 | 52 | 15 | 1 | 4 | ----- | --- |
| Roll engineers | 1926 | 25 | 76 | 54.6 | .978 | 53.40 | 12 | 68 | 3 | 16 | ---- | 1 | --- |
| | 1929 | 22 | 65 | 56.6 | 1.006 | 56.94 | 12 | 65 | ---- | 17 | ---- | 3 | 3 |
| Rollers | 1926 | 27 | 78 | 52.0 | 1.498 | 77.90 | 32 | 50 | 13 | 3 | 3 | ----- | --- |
| | 1929 | 30 | 87 | 53.4 | 1.542 | 82.34 | 34 | 49 | 9 | 2 | 2 | ----- | 2 |
| Manipulators | 1926 | 27 | 87 | 52.6 | .901 | 47.39 | 29 | 47 | 20 | 3 | 1 | ----- | --- |
| | 1929 | 29 | 91 | 54.3 | 1.010 | 54.84 | 33 | 45 | 14 | 2 | ---- | ----- | 5 |
| Table men | 1926 | 14 | 45 | 52.6 | .643 | 33.82 | 33 | 53 | ---- | 4 | 9 | ----- | --- |
| | 1929 | 15 | 48 | 55.0 | .656 | 36.08 | 25 | 56 | ---- | ----- | 6 | ----- | 13 |
| Shearmen | 1926 | 26 | 84 | 51.5 | .812 | 41.82 | 36 | 49 | 14 | ----- | 1 | ----- | --- |
| | 1929 | 29 | 91 | 53.5 | .864 | 46.22 | 35 | 51 | 7 | 4 | 1 | ----- | 2 |
| Shearmen's helpers | 1926 | 23 | 168 | 52.2 | .601 | 31.37 | 37 | 39 | 19 | 2 | 3 | ----- | --- |
| | 1929 | 25 | 134 | 54.9 | .622 | 34.15 | 28 | 47 | 14 | 4 | 2 | ----- | 4 |
| Laborers | 1926 | 22 | 429 | 56.3 | .451 | 25.39 | 39 | 16 | 27 | 14 | 4 | ----- | --- |
| | 1929 | 28 | 423 | 57.0 | .463 | 26.39 | 32 | 33 | 20 | 12 | ---- | ----- | 2 |

TABLE 3.—AVERAGE CUSTOMARY FULL-TIME HOURS PER WEEK, AVERAGE EARNINGS PER HOUR, AND AVERAGE FULL-TIME WEEKLY EARNINGS OF PRINCIPAL OCCUPATIONS IN THE IRON AND STEEL INDUSTRY, 1926 AND 1929—Continued

*Plate mills*

| Occupation | Year | Number of plants | Number of employees | Average full-time hours per week | Average earnings per hour | Average full-time weekly earnings | Per cent of employees whose average full-time hours per week were— | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | 48 and under | Over 48 and under 60 | 60 | Over 60 and under 72 | 72 | Over 72 and under 84 | 84 |
| Charging-crane and charging-machine operators. | 1926 | 16 | 88 | 56.4 | $0.711 | $40.10 | 23 | 26 | 17 | 34 | ---- | ---- | --- |
| | 1929 | 17 | 91 | 59.6 | .756 | 45.06 | 20 | 26 | 5 | 21 | 4 | 23 | --- |
| Heaters | 1926 | 17 | 85 | 55.5 | 1.103 | 61.22 | 14 | 54 | 4 | 28 | ---- | ---- | --- |
| | 1929 | 17 | 72 | 57.9 | 1.220 | 70.64 | 17 | 47 | ---- | 15 | 3 | 18 | --- |
| Heaters' helpers | 1926 | 15 | 118 | 62.4 | .580 | 36.19 | 3 | 25 | 29 | 26 | ---- | 16 | --- |
| | 1929 | 14 | 92 | 62.4 | .671 | 41.87 | ---- | 38 | 10 | 24 | 23 | 5 | --- |
| Roll engineers | 1926 | 14 | 35 | 63.0 | .651 | 41.01 | 9 | 17 | 23 | 37 | ---- | 14 | --- |
| | 1929 | 11 | 31 | 62.2 | .675 | 41.99 | 32 | 10 | ---- | 32 | 13 | 13 | --- |
| Rollers, sheared-plate mills | 1926 | 13 | 30 | 57.0 | 1.364 | 77.75 | 30 | 10 | 10 | 50 | ---- | ---- | --- |
| | 1929 | 12 | 29 | 61.0 | 1.595 | 97.30 | 21 | 21 | 7 | 31 | ---- | 21 | --- |
| Screw men, sheared-plate mills. | 1926 | 10 | 26 | 55.0 | 1.088 | 59.84 | 46 | 12 | ---- | 42 | ---- | ---- | --- |
| | 1929 | 11 | 39 | 63.0 | 1.023 | 64.45 | 15 | 28 | ---- | 26 | ---- | 31 | --- |
| Table operators, sheared-plate mills. | 1926 | 12 | 32 | 56.1 | .804 | 45.10 | 38 | 16 | 6 | 41 | ---- | ---- | --- |
| | 1929 | 12 | 38 | 60.0 | .873 | 52.38 | 16 | 34 | 5 | 26 | 8 | 11 | --- |
| Hook men, sheared-plate mills. | 1926 | 12 | 83 | 56.1 | .693 | 38.88 | 36 | 12 | 11 | 41 | ---- | ---- | --- |
| | 1929 | 12 | 76 | 60.2 | .776 | 46.72 | 16 | 37 | 11 | 16 | ---- | 21 | --- |
| Roll hands, other, sheared-plate mills. | 1926 | 10 | 36 | 55.5 | .725 | 40.24 | 33 | 6 | 25 | 36 | ---- | ---- | --- |
| | 1929 | 11 | 44 | 60.7 | .821 | 49.83 | 20 | 20 | 11 | 39 | ---- | 9 | --- |
| Rollers, universal mills | 1926 | 5 | 13 | 56.3 | 1.383 | 77.86 | 31 | 23 | 15 | 31 | ---- | ---- | --- |
| | 1929 | 6 | 15 | 56.7 | 1.323 | 75.01 | 20 | 40 | 13 | 13 | ---- | 13 | --- |
| Screw men, main rolls, universal mills. | 1926 | 6 | 17 | 57.1 | .937 | 53.50 | 18 | 18 | 41 | 24 | ---- | ---- | --- |
| | 1929 | 6 | 17 | 55.4 | .917 | 50.80 | 35 | 35 | 6 | 12 | ---- | 12 | --- |
| Screw men, side rolls, universal mills. | 1926 | 6 | 18 | 57.5 | .709 | 40.77 | 22 | 17 | 28 | 33 | ---- | ---- | --- |
| | 1929 | 5 | 15 | 61.2 | .704 | 43.08 | 20 | 20 | 20 | 27 | ---- | 13 | --- |
| Roll hands, other, universal mills. | 1926 | 5 | 20 | 58.2 | .601 | 34.98 | 15 | ---- | 60 | 25 | ---- | ---- | --- |
| | 1929 | 4 | 12 | 58.9 | .583 | 34.34 | 42 | 25 | ---- | 17 | ---- | 17 | --- |
| Shearmen | 1926 | 17 | 101 | 56.3 | .836 | 47.07 | 29 | 22 | 40 | 10 | ---- | ---- | --- |
| | 1929 | 17 | 123 | 58.0 | .863 | 50.05 | 20 | 28 | 24 | 15 | 14 | ---- | --- |
| Shearmen's helpers | 1926 | 17 | 674 | 55.1 | .579 | 31.90 | 32 | 18 | 44 | 7 | ---- | ---- | --- |
| | 1929 | 17 | 568 | 57.3 | .630 | 36.10 | 21 | 26 | 29 | 16 | 7 | ---- | --- |
| Laborers | 1926 | 16 | 304 | 56.1 | .425 | 23.84 | 41 | 14 | 28 | 16 | 2 | ---- | --- |
| | 1929 | 15 | 225 | 59.3 | .409 | 24.25 | 7 | 21 | 46 | 24 | (1) | ---- | 1 |

[1] Less than 1 per cent.

## Changes in Employment

As was shown in Table 1, data were secured for 31 identical open-hearth plants for both 1926 and 1929. When the number of employees in these 31 identical plants is compared it will be observed that the number was 8 per cent less in 1929 than in 1926. During the 1926 pay-roll period these 31 plants operated a total of 293 open-hearth furnaces as compared with 300 furnaces during the 1929 pay-roll period.

The 11 puddling mills for which data were secured in 1929 are identical with 11 of the 13 secured in 1926. It may be noticed that the number of employees in 1929 was 18 per cent less than in 1926.

Twenty-five of the 30 blooming-mill plants scheduled in 1929 were identical plants in both years; however, these 25 identical plants employed 9 per cent fewer workers in 1929 than in 1926. There were 17 plate-mill plants scheduled in both the 1926 and 1929 studies, of which 15 were identical in both years. In 1929 the number of employees in these 15 identical plants was 11 per cent less than in 1926.

## Entrance Wage Rates for Common Labor, July 1, 1929

THE term "common labor" has many interpretations among different industries and even among different localities or plants in the same industry. Also, many employers make a practice of increasing the rate of pay of a laborer after a stated length of service, provided a sufficient degree of fitness for the job has been developed; otherwise the employee is dropped. Owing to these difficulties in the way of securing comparable data as to wage rates for common labor, the Bureau of Labor Statistics has confined these statistics to entrance rates alone—that is, to rates of pay per hour for unskilled adult male common laborers when first hired.

This survey is limited to 13 important industries, which require considerable numbers of common laborers. Some establishments have reported two rates—for example, one for the 10-hour day and one for the 8-hour day, or one for white and one for colored or Mexican workers; these distinctions have not been maintained in the tabulated data, although it is apparent that the lowest rates are shown for those geographic divisions where there are large numbers of colored or Mexican workers, while the highest rates are shown for localities where an 8-hour day is more or less prevalent.

The industries included in this survey and the number of common laborers employed at entrance rates in the establishments reporting in each specified industry, on July 1, 1929, were as follows:

| | |
|---|---|
| Automobiles | 11,551 |
| Brick, tile, and terra cotta | 3,943 |
| Cement | 1,685 |
| Electrical machinery, apparatus, and supplies | 3,806 |
| Foundry and machine-shop products | 10,394 |
| Iron and steel | 23,316 |
| Leather | 3,361 |
| Lumber (sawmills) | 12,090 |
| Paper and pulp | 8,460 |
| Petroleum refining | 7,701 |
| Slaughtering and meat packing | 12,856 |
| Public utilities | 14,666 |
| General contracting | 41,499 |
| Total | 155,328 |

The number of common laborers employed at entrance rates in the establishments reporting in each of the nine geographic divisions of the United States on July 1, 1929, was as shown below:

| | |
|---|---|
| New England | 9,285 |
| Middle Atlantic | 35,396 |
| East North Central | 44,392 |
| West North Central | 15,753 |
| South Atlantic | 12,975 |
| East South Central | 6,486 |
| West South Central | 10,986 |
| Mountain | 5,594 |
| Pacific | 14,461 |
| Total | 155,328 |

The weighted average entrance rate per hour for common labor for the several industries combined on July 1, 1929, was 43.7 cents. The general-contracting industry reported the highest rate, $1.188, in the Middle Atlantic division; while the lowest rate, 15 cents, was paid in both the public utilities and general contracting industries in the South Atlantic division.

The highest average rate per hour for any industry, 49.9 cents, appeared in the automobile industry, followed by 48.3 cents in general contracting, 45.9 cents in electrical machinery, and 45.7 cents in petroleum refining; the lowest average rate, 32 cents, appeared in the sawmill industry.

The highest average rate in the nine geographic divisions, 48.4 cents, appeared in the East North Central division. The New England, Middle Atlantic, and Pacific divisions showed average rates of 48 cents, 46.4 cents, and 47.9 cents, respectively. The lowest average rate, 26.8 cents, appeared in the East South Central division.

The weighted average entrance rates per hour for all industries represented in this study, including general contracting, have been as follows: July 1, 1926, 42.8 cents; October 1, 1926, 43.4 cents; January 1, 1927, 43.2 cents; July 1, 1927, 42.6 cents; January 1, 1928, 43 cents; July 1, 1928, 44.9 cents; January 1, 1929, 45 cents; July 1, 1929, 43.7 cents.

Omitting data for general contracting, which was first included in these compilations on July 1, 1926, average entrance rates per hour for the periods studied have been: January 1, 1926, 40.2 cents; April 1, 1926, 40.5 cents; July 1, 1926, 40.9 cents; October 1, 1926, 40.9 cents; January 1, 1927, 41 cents; July 1, 1927, 40.4 cents; January 1, 1928, 41.1 cents; July 1, 1928, 44.1 cents; January 1, 1929, 43.9 cents; July 1, 1929, 42.1 cents.

The rather notable decrease in the average rate for July 1, 1929, as compared with the last two reports, was brought about, not by any actual decrease in wage rates but by there being, on July 1, 1929, only about one-half as many common laborers employed at entrance rates, in the automobile industry as on January 1, 1929, or July 1, 1928. Several of the largest establishments in the industry automatically increase common labor rates after a specified number of months of employment, and as these establishments had been gradually decreasing their forces since May the number of newly hired employees on July 1 was relatively very small.

The table following shows, for each industry included, the high, low, and average common-labor entrance rates per hour on July 1, 1929, in each geographic division and in the United States as a whole:

HOURLY ENTRANCE WAGE RATES FOR COMMON LABOR, JULY 1, 1929

[The rates on which this table is based are entrance rates paid for adult male common labor]

| Industry | United States | Geographic division | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | New England [1] | Middle Atlantic [2] | East North Central [3] | West North Central [4] | South Atlantic [5] | East South Central [6] | West South Central [7] | Mountain [8] | Pacific [9] |
| Automobiles: | *Cents* | *Cents* | *Cents* | *Cents* | *Cents* | *Cents* | *Cents* | *Cents* | *Cents* | *Cents* |
| Low | 32.0 | ------ | 40.0 | 35.0 | 32.0 | ------ | ------ | ------ | ------ | 45.0 |
| High | 65.0 | ------ | 62.5 | 65.0 | 62.5 | ------ | ------ | ------ | ------ | 55.0 |
| Average | 49.9 | ------ | 49.5 | 49.6 | 55.6 | ------ | ------ | ------ | ------ | 52.9 |
| Brick, tile, and terra cotta: | | | | | | | | | | |
| Low | 18.5 | 40.0 | 35.0 | 30.0 | 27.0 | 20.0 | 18.5 | 25.0 | 38.5 | 39.0 |
| High | 53.0 | 50.0 | 52.5 | 47.5 | 35.0 | 50.0 | 37.0 | 37.5 | 40.0 | 53.0 |
| Average | 37.8 | 45.1 | 45.9 | 38.5 | 34.4 | 27.7 | 26.2 | 27.8 | 39.2 | 46.3 |
| Cement: | | | | | | | | | | |
| Low | 25.0 | ------ | 35.0 | 35.0 | 33.0 | ------ | 26.0 | 25.0 | ------ | 34.0 |
| High | 56.0 | ------ | 45.0 | 51.0 | 44.0 | ------ | 40.0 | 28.0 | ------ | 56.0 |
| Average | 37.8 | ------ | 42.5 | 38.0 | 35.7 | ------ | 31.0 | 27.3 | ------ | 47.2 |

HOURLY ENTRANCE WAGE RATES FOR COMMON LABOR, JULY 1, 1929—Continued

| Industry | United States | Geographic division | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | New England [1] | Middle Atlantic [2] | East North Central [3] | West North Central [4] | South Atlantic [5] | East South Central [6] | West South Central [7] | Mountain [8] | Pacific [9] |
| Electrical machinery, apparatus, and supplies: | *Cents* | *Cents* | *Cents* | *Cents* | *Cents* | *Cents* | *Cents* | *Cents* | *Cents* | *Cents* |
| Low | 35.0 | 35.0 | 38.0 | 38.0 | 35.0 | 40.0 | ------ | ------ | ------ | ------ |
| High | 55.0 | 48.0 | 55.0 | 53.0 | 35.0 | 45.0 | ------ | ------ | ------ | ------ |
| Average | 45.9 | 44.9 | 44.6 | 48.4 | 35.0 | 42.4 | ------ | ------ | ------ | ------ |
| Foundry and machine-shop products: | | | | | | | | | | |
| Low | 17.5 | 33.0 | 30.0 | 35.0 | 33.0 | 17.5 | 27.5 | 20.0 | 30.0 | 44.0 |
| High | 56.0 | 50.0 | 55.0 | 55.0 | 50.0 | 43.8 | 40.0 | 31.3 | 56.0 | 56.0 |
| Average | 39.8 | 39.6 | 42.0 | 43.5 | 40.3 | 27.5 | 32.6 | 29.5 | 40.5 | 51.4 |
| Iron and steel: | | | | | | | | | | |
| Low | 20.0 | 40.0 | 30.0 | 35.0 | 35.0 | 20.0 | 23.5 | ------ | 44.0 | 42.5 |
| High | 55.0 | 45.0 | 50.0 | 50.0 | 40.0 | 44.0 | 31.0 | ------ | 49.0 | 55.0 |
| Average | 42.5 | 41.8 | 41.8 | 43.6 | 36.8 | 35.4 | 28.5 | ------ | 48.7 | 48.6 |
| Leather: | | | | | | | | | | |
| Low | 25.0 | 45.0 | 33.0 | 31.6 | ------ | 25.0 | 25.0 | ------ | ------ | 43.0 |
| High | 54.2 | 54.2 | 50.0 | 54.0 | ------ | 40.0 | 35.0 | ------ | ------ | 54.0 |
| Average | 42.2 | 50.0 | 44.2 | 43.4 | ------ | 34.6 | 33.7 | ------ | ------ | 52.6 |
| Lumber (sawmills): | | | | | | | | | | |
| Low | 17.5 | 30.0 | 30.0 | 30.0 | 30.0 | 17.5 | 17.5 | 20.0 | 40.0 | 32.5 |
| High | 62.5 | 36.0 | 40.0 | 62.5 | 32.5 | 35.0 | 25.0 | 27.5 | 42.5 | 50.0 |
| Average | 32.0 | 32.1 | 36.9 | 34.9 | 31.8 | 19.7 | 21.6 | 24.2 | 41.2 | 41.7 |
| Paper and pulp: | | | | | | | | | | |
| Low | 20.0 | 33.3 | 35.0 | 31.5 | 35.0 | 30.0 | 20.0 | 25.0 | ------ | 40.0 |
| High | 55.0 | 53.0 | 55.0 | 55.0 | 45.0 | 38.3 | 36.5 | 32.5 | ------ | 51.3 |
| Average | 44.0 | 47.4 | 41.6 | 44.4 | 39.2 | 36.4 | 27.1 | 25.4 | ------ | 43.3 |
| Petroleum refining: | | | | | | | | | | |
| Low | 25.0 | ------ | 45.0 | 44.4 | 50.0 | 30.0 | 32.5 | 25.0 | 45.0 | 53.0 |
| High | 62.0 | ------ | 53.0 | 56.0 | 50.0 | 50.0 | 32.5 | 51.0 | 56.3 | 62.0 |
| Average | 45.7 | ------ | 46.3 | 51.4 | 50.0 | 40.3 | 32.5 | 42.5 | 51.9 | 57.4 |
| Slaughtering and meat packing: | | | | | | | | | | |
| Low | 27.5 | 38.0 | 40.0 | 40.0 | 37.5 | 40.0 | ------ | 27.5 | 42.5 | 40.0 |
| High | 50.0 | 50.0 | 45.0 | 45.0 | 45.0 | 40.0 | ------ | 42.5 | 42.5 | 42.5 |
| Average | 42.0 | 44.8 | 41.9 | 42.0 | 42.1 | 40.0 | ------ | 40.9 | 42.5 | 41.9 |
| Public utilities [10] | | | | | | | | | | |
| Low | 15.0 | 35.0 | 40.0 | 32.5 | 30.0 | 15.0 | 25.0 | 25.0 | 35.0 | 33.0 |
| High | 64.0 | 59.5 | 61.3 | 60.0 | 40.0 | 50.0 | 40.0 | 50.0 | 42.0 | 64.0 |
| Average | 42.8 | 45.9 | 45.5 | 47.6 | 36.0 | 37.3 | 30.3 | 33.0 | 38.5 | 50.4 |
| General contracting [11] | | | | | | | | | | |
| Low | 15.0 | 40.0 | 30.0 | 35.0 | 30.0 | 15.0 | 20.0 | 20.0 | 35.0 | 43.8 |
| High | 118.8 | 90.0 | 118.8 | 90.0 | 95.0 | 60.0 | 50.0 | 50.0 | 62.5 | 100.0 |
| Average | 48.3 | 53.8 | 54.3 | 59.9 | 42.2 | 28.7 | 28.0 | 34.5 | 45.2 | 52.7 |
| Total: | | | | | | | | | | |
| Low | 15.0 | 30.0 | 30.0 | 30.0 | 27.0 | 15.0 | 17.5 | 20.0 | 30.0 | 32.5 |
| High | 118.8 | 90.0 | 118.8 | 90.0 | 95.0 | 60.0 | 50.0 | 51.0 | 62.5 | 100.0 |
| Average | 43.7 | 48.0 | 46.4 | 48.4 | 41.8 | 30.2 | 26.8 | 35.6 | 44.9 | 47.9 |

[1] Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont.
[2] New Jersey, New York, Pennsylvania.
[3] Illinois, Indiana, Michigan, Ohio, Wisconsin.
[4] Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, South Dakota.
[5] Delaware, District of Columbia, Florida, Georgia, Maryland, North Carolina, South Carolina, Virginia, West Virginia.
[6] Alabama, Kentucky, Mississippi, Tennessee.
[7] Arkansas, Louisiana, Oklahoma, Texas.
[8] Arizona, Colorado, Idaho, Montana, New Mexico, Nevada, Utah, Wyoming.
[9] California, Oregon, Washington.
[10] Includes street railways, gas works, waterworks, and electric power and light plants.
[11] Includes building, highway, public works, and railroad construction.

## Wage Increases Established by Recent Agreements and Awards

### Maintenance of Way Employees—New York Central Railroad

THE Brotherhood of Maintenance of Way Employees has secured an increase in wage rates on the New York Central Railroad through direct negotiations with the management, the increase of all employees under jurisdiction of the brotherhood ranging from 1 cent

to 5 cents an hour, effective August 1, 1929. All overtime, after 8 hours, will be paid for at the rate of time and one-half, effective August 16, 1929.

### Shopmen—Akron, Canton & Youngstown Railroad

SHOPCRAFT employees on the Akron, Canton & Youngstown Railroad have secured an increase of 2 cents an hour, effective September 1, 1929. This establishes a minimum hourly rate of 81 cents for mechanics and 56 cents for helpers.

### Railroad Signalmen

SIGNAL employees on the Eligin, Joliet & Eastern Railway have secured an increase in wage rates through direct negotiation with the management. Leading signalmen, leading signal maintainers, and certain other classes receive an increase of 7 cents an hour. All other workers paid by the hour receive an increase of 5 cents an hour. Foremen on monthly rates receive an increase of $10 per month.

The Grand Trunk Western Railway Co. granted wage increases to signal-department employees of 4 cents and 5 cents for all classes on the hourly basis and $10 and $15 for those on the monthly basis, establishing the following rates, effective July 1, 1929: Foremen, $230 per month; leading signalmen, 87 cents an hour; mechanics, 83 cents an hour; apprentices, 57 cents, 61 cents, and 70 cents an hour.

### Street-railway Employees—Toledo, Ohio

EMPLOYEES of the Community Traction Co. of Toledo, Ohio, by an agreement retroactive to June 1, 1929, receive the following wage increases:

Trainmen, bus operators, and car-shop employees receive a flat increase of 2 cents an hour, making the scale 52 cents an hour for beginners in the first three months, 54 cents an hour for the succeeding nine months, and 57 cents an hour for all employees with the company for more than one year. Operators of one-man cars and of busses receive 5 cents an hour additional. Watchmen receive $5 per month increase. In the garage the working-day is changed from 9 to 8 hours, and expert mechanics receive an increase of 10 cents an hour.

### Street-railway Employees—Covington, Ky.

STREET-RAILWAY employees have negotiated a new wage agreement with the Cincinnati, Newport & Covington Light & Traction Co. of Covington, Ky., effective August 5, 1929. The wage rates of motormen, conductors, and car-house employees are increased 2 cents an hour. Motormen and conductors receive 55 cents an hour for the first three months, 58 cents for the next nine months, and 60 cents an hour thereafter. The new agreement also provides for a guaranty of $100 a month for extra men, replacing the old guaranty of $90 a month.

### Street-railway Employees—Boston Elevated Railway Co.

STREET-RAILWAY employees and the Boston Elevated Railway Co. have made a new two-year wage and working agreement. Under the new agreement wages remain unchanged except for the motormen

on the rapid transit lines. Their pay is increased from 78½ cents an hour to 80 cents an hour. The new agreement also provides for a 10-day vacation with pay the first year with an increase of vacation to two weeks the second year. Employees absent from work more than 28 days the previous year are not entitled to a vacation, but absences due to jury and court duties, accidents, or extended sickness are not included in the 28 days.

## Working Hours of the Housewife

IN SPITE of the widespread introduction of labor-saving devices into the home and the growing use of ready-made products, the average housewife still has a very long working-day. With the help of the extension and research staffs of several colleges, the Bureau of Home Economics of the United States Department of Agriculture induced more than 2,000 housewives to keep careful daily records of how they spent their time for seven days of a typical week. Most of the records came from farm and village women in middle-class homes, although club women in towns and cities were also represented. Preliminary figures from the data obtained in this survey have been published in the Yearbook of Agriculture, 1928 (p. 620), issued by the Department of Agriculture, and in an article by Hildegarde Kneeland in the graphic number of The Survey (New York) for June 1, 1929, entitled "Is the Modern Housewife a Lady of Leisure?" The information presented below is taken from the latter source, since it presents more complete figures.

Five-sixths of the women included in the survey spent over 42 hours a week in their home making, more than half spent over 48 hours, and one-third over 56 hours, the combined average being slightly over 51 hours a week. The average time spent in all work by 950 farm women was over 62 hours a week, their duties including care of poultry and milk, gardening, and other farm work in addition to the actual housekeeping.

The writer of the article considers that the most surprising findings were those relating to the city women. The average time spent in home making by the women in cities of from 2,500 to 50,000 population was 51 hours a week and in cities of 50,000 and upward, a little over 48 hours, in spite of the fact that the average city household (4.1 persons) was smaller than the rural (4.4 persons), and that the city housewife had more help. Only 10 per cent of the women in large cities spent less than 35 hours a week in their home making. The city housewives devoted somewhat more time to caring for their children and to purchasing and less to cooking and dishwashing than the rural housewives. The smaller amount of time spent in the kitchen is said to have been due mainly to the large number of meals eaten away from home by members of the city families. The figures for the other routine tasks were almost identical, averaging about 7½ hours per week for cleaning, 5¼ for laundering, 1½ for mending, and 4½ for sewing. For all women covered in the survey the time devoted to purchasing, planning, and other management averaged only 2½ hours per week, and only 4½ hours were given to caring for members of the

family—dressing and bathing the children, teaching, supervising, and other direct care.

One-sixth of the housewives received no help in their work, either from paid workers or from members of the family, and those who did have assistance averaged only 10 hours of help a week. The writer points out that "much of the gain which the industrial revolution has so far brought has gone into reducing the work of the household to a 1-worker job," and that although it is popularly supposed to have transformed the household drudge into a lady of leisure, "we appear to have overestimated the speed at which the transformation has been taking place."

## Collection of Wage Claims in Nevada, 1927 and 1928

DURING the biennium 1927 and 1928 the office of the Nevada Commissioner of Labor, with the assistance of the district attorney's office, collected approximately $22,000 in wages owed to workers which they would have entirely lost if it had not been for the State's intervention. This statement and the following statistics concerning the collection of these claims for 1927 and 1928 are taken from the biennial report of the commissioner of labor covering that period:

| | Number |
|---|---|
| Cases filed during 1927 and 1928 | 505 |
| Cases completed: | |
| Dropped by attorney | 7 |
| Dropped by commission | 168 |
| Settled by attorney, court action | 11 |
| Settled by commission | 155 |
| Total | 341 |
| Cases pending | 164 |

*Financial summary*

| | |
|---|---|
| Total collected— | |
| By attorney, court action | $5,695.21 |
| By commission | 15,743.65 |
| Total net returns to claimants | 21,438.86 |
| Cost to State | Not any. |

*Reasons for cases being dropped*

| | Number of cases |
|---|---|
| Insufficient assets | 5 |
| No jurisdiction | 9 |
| Request of claimant | 29 |
| No legal claim (admitted by claimant) | 27 |
| Insufficient evidence | 27 |
| Insufficient evidence (by attorney) | 7 |
| Address of employer unknown | 2 |
| Silence on part of claimant after filing case | 67 |
| Death of employer—no assets | 2 |

## Hours and Earnings in the Silk Industry in Pennsylvania

AN INVESTIGATION of the working hours and earnings of nearly 17,000 men and women employed in 62 silk plants in Pennsylvania has been made by the bureau of women and children

of the State department of labor and industry.[1] The study covered over one-fourth of the silk workers and 15 per cent of the silk plants of the State, both large and small establishments being represented. Since 1910, the report states, the number of wage earners in the silk industry in Pennsylvania has practically doubled, more than twice as many persons being employed as in any other State, and the value of the product has tripled.

The silk industry of Pennsylvania is concentrated in the eastern half of the State. For the purpose of the study this section was divided into six geographical districts or city areas, including Easton, Philadelphia, Scranton, Sunbury, Wilkes-Barre, and York. All plants where weaving was done were classed as weaving plants even though throwing operations were included. The establishments classed as throwing plants, therefore, were those in which only throwing was done. Of the 62 plants covered, 41 were listed as weaving and 21 as throwing plants. The pay period chosen for study was the week ending nearest to February 15, 1928, which was representative of the industry in the busy season, when wages and employment were around the peak point of the year. The data on weekly hours and earnings were copied directly from the plant pay rolls by representatives of the bureau of women and children, but information on scheduled plant hours, lunch periods, and work shifts was obtained from questioning the employers or their representatives.

A large proportion of the plants were operating more than one daily work shift. Only 12 plants worked one shift, 45 worked two shifts, and 5 worked three shifts. The typical schedule of the day shift was the 50-hour week, but the hours for night shifts frequently exceeded 54. Only men were employed on the night shifts. The scheduled hours of the middle shift, which usually started in the afternoon and ended before midnight, were less than 48 in all but one establishment. Practically no difference was found in the scheduled hours in weaving and throwing plants and there was seldom any variation in the hours scheduled for men and women on the same shift.

In all but two plants Saturday was a short workday, five hours being the schedule in 50 of the 62 plants and less than five hours in 9 plants, while 1 plant had no scheduled hours for Saturday.

The scheduled lunch period on the day shift in 35 plants, or more than half of those studied, was 45 minutes; in 22 plants, 1 hour; in 3 plants, between 45 minutes and 1 hour; and in 1 plant, 30 minutes. In the remaining plant there was no scheduled lunch period. No lunch period was scheduled for employees on the middle shift. Lunch periods for men on the night shift varied from 30 minutes to 1 hour in 34 plants, the time allowed in the other plants not being given in the report.

### Hours of Work

IT WAS found that approximately three-fourths of the employees had a scheduled work week of 50 hours, but only 19 per cent of the men and 28 per cent of the women worked 50 hours. Eight per cent of the women had a scheduled work week of 54 hours, the maximum permitted by law, and the schedule of 15 per cent of the men exceeded

[1] Pennsylvania. Department of Labor and Industry. Special Bulletin No. 29: Hours and Earnings of Men and Women in the Silk Industry, prepared by bureau of women and children. Harrisburg, 1929.

54. The women with scheduled hours under 44 were those employed on the short-time middle shift.

The actual hours worked by men were more than for the women, 81 per cent of the men as compared with 61 per cent of the women working more than 48 hours. Forty-one per cent of the men worked more than 54 hours and nearly one-fourth worked 60 hours or more. Nearly one-fourth of the women worked less than 44 hours.

Table 1 shows the number and per cent of men and women having each specified number of scheduled and of actual working hours per week. The proportion of employees whose hours were recorded was in all cases, with the exception of male weavers, not less than two-thirds of the entire group. Actual hours of work were recorded for only 48 per cent of the male weavers. The report states that "it can be presumed that it was the pieceworkers whose work hours were least likely to be indicated on the pay roll."

TABLE 1.—SCHEDULED AND ACTUAL WEEKLY HOURS OF WORKERS IN THE PENNSYLVANIA SILK INDUSTRY

| Hours per week | Scheduled weekly hours | | | | Actual weekly hours | | | |
|---|---|---|---|---|---|---|---|---|
| | Men | | Women | | Men | | Women | |
| | Number | Per cent | Number | Per cent | Number | Per cent | Number | Per cent |
| Under 44 | | | 134 | 1.2 | 524 | 11.0 | 1,874 | 22.9 |
| 44 | | | | | 22 | .5 | 40 | .5 |
| Over 44 and under 48 | 235 | 3.7 | 98 | 1.0 | 319 | 6.6 | 873 | 10.7 |
| 48 | 46 | .7 | 43 | .4 | 34 | .7 | 393 | 4.8 |
| Over 48 and under 50 | 3 | .1 | 60 | .6 | 164 | 3.5 | 448 | 5.4 |
| 50 | 4,518 | 72.1 | 8,514 | 85.6 | 902 | 19.0 | 2,332 | 28.5 |
| Over 50 and under 54 | 226 | 3.6 | 312 | 3.1 | 652 | 13.7 | 1,214 | 14.8 |
| 54 | 325 | 5.2 | 788 | 7.9 | 178 | 3.7 | 920 | 11.3 |
| Over 54 and under 60 | 495 | 7.9 | | | 838 | 17.6 | 67 | 1.0 |
| 60 and over | 420 | 6.7 | | | 1,123 | 23.6 | 9 | .1 |
| Total | 6,268 | 100.0 | 9,949 | 100.0 | 4,756 | 100.0 | 8,170 | 100.0 |
| No record of hours | | | | | 1,512 | | 1,779 | |

The tendency seemed to be for men to be employed more and women less than their schedules. Only one-third of all the employees worked the regular hours of their shifts. The women averaged a higher proportion of full-time work than the men. Nearly one-half of the men worked overtime, or more than their scheduled hours, and over one-third of the women worked undertime. One-fifth of the men whose hours were reported worked eight hours or more beyond their regular schedule and practically one-fifth of the women lost eight hours or more. However, one-fourth of the men also worked undertime. The report states that "the high proportion of undertime work at a period of extreme activity in the industry must be considered one of the outstanding findings of this study." Although some departments were rushed with work and in others work was slack, there was no department which did not have an appreciable amount of both undertime and overtime employment.

Table 2 shows the number and per cent of men and women working full-time, overtime, and undertime, without regard to occupation or department.

TABLE 2.—NUMBER AND PER CENT OF MEN AND WOMEN WORKING FULL TIME, OVERTIME, AND UNDERTIME IN THE PENNSYLVANIA SILK INDUSTRY

| Hours | Men | | Women | |
|---|---|---|---|---|
| | Number | Per cent | Number | Per cent |
| Full time | 1,294 | 27.2 | 3,063 | 37.5 |
| Overtime: | | | | |
| Under 4 | 631 | 13.3 | 917 | 11.2 |
| 4 and under 8 | 670 | 14.1 | 810 | 9.9 |
| 8 and under 15 | 479 | 10.0 | 29 | .3 |
| 15 and under 40 | 490 | 10.3 | 2 | .1 |
| 40 and over | 27 | .5 | ---- | ---- |
| Total overtime | 2,297 | 48.3 | 1,758 | 21.5 |
| Undertime | | | | |
| Under 4 | 332 | 7.0 | 1,053 | 12.9 |
| 4 and under 8 | 273 | 5.7 | 788 | 9.6 |
| 8 and under 15 | 251 | 5.3 | 694 | 8.5 |
| 15 and under 40 | 277 | 5.8 | 732 | 9.0 |
| 40 and over | 32 | .7 | 82 | 1.0 |
| Total undertime | 1,165 | 24.5 | 3,349 | 41.0 |
| Total reporting | 4,756 | 100.0 | 8,170 | 100.0 |
| No record of hours | 1,512 | ---- | 1,779 | ---- |
| Grand total | 6,268 | ---- | 9,949 | ---- |

## Earnings

IN THE silk industry a 2-week pay period is customary and 50 of the 62 plants paid on this basis. Only seven had a weekly pay day. In five the pay period was semimonthly. Neither the 1-week nor the 2-week pay period was typical of any one geographical district of the State, although the five plants paying semimonthly were all located in the Scranton area.

The median weekly earnings of all workers combined were $26.93 for men and $16.29 for women. The difference of over $10 in the earnings of men and women, the report states, is explained only in part by the amount of overtime worked by the men and the undertime worked by the women, since the median earnings of men and women working full time in the same occupational group showed a difference ranging from $3.18 in the throwing department of throwing plants to $12.51 in the entering and twisting department of weaving plants.

Table 3 shows the range in the weekly earnings of men and women.

TABLE 3.—WEEKLY EARNINGS OF MEN AND WOMEN IN THE SILK INDUSTRY OF PENNSYLVANIA

| Weekly earnings | Men | | Women | |
|---|---|---|---|---|
| | Number | Per cent | Number | Per cent |
| Less than $10 | 286 | 4.6 | 1,570 | 15.8 |
| $10 and under $12 | 319 | 5.1 | 1,044 | 10.5 |
| $12 and under $14 | 247 | 3.9 | 1,135 | 11.4 |
| $14 and under $16 | 309 | 4.9 | 1,095 | 11.0 |
| $16 and under $18 | 297 | 4.7 | 892 | 9.0 |
| $18 and under $20 | 323 | 5.2 | 686 | 6.9 |
| $20 and under $25 | 992 | 15.8 | 1,507 | 15.1 |
| $25 and under $30 | 845 | 13.5 | 1,047 | 10.5 |
| $30 and under $40 | 1,396 | 22.3 | 890 | 8.9 |
| $40 and under $50 | 882 | 14.1 | 77 | .8 |
| $50 and under $60 | 275 | 4.4 | 6 | .1 |
| $60 and over | 97 | 1.5 | ---- | ---- |
| Total | 6,268 | 100.0 | 9,949 | 1.000 |
| Median earnings | $26.93 | ---- | $16.29 | ---- |

Median weekly earnings in the different occupations are given in Table 4.

TABLE 4.—MEDIAN WEEKLY EARNINGS OF MEN AND OF WOMEN IN THE SILK INDUSTRY OF PENNSYLVANIA, BY OCCUPATION

| Occupational classification | Men | | | | Women | | | |
|---|---|---|---|---|---|---|---|---|
| | All workers | | Full-time workers | | All workers | | Full-time workers | |
| | Number | Median earnings | Number | Median earnings | Number | Median earnings | Number | Median earnings |
| Weaving plants: | | | | | | | | |
| Winding | 8 | (1) | 5 | (1) | 1,357 | $13.76 | 208 | $16.28 |
| Throwing | 183 | $23.22 | 42 | $21.25 | 255 | 14.53 | 81 | 14.45 |
| Quilling | 24 | 12.75 | 6 | (1) | 594 | 11.59 | 161 | 12.92 |
| Warping | 249 | 34.60 | 40 | 31.50 | 808 | 25.40 | 310 | 28.23 |
| Entering and twisting | 155 | 30.99 | 57 | 32.50 | 275 | 17.50 | 89 | 19.99 |
| Weaving | 1,846 | 33.54 | 432 | 34.94 | 3,231 | 23.44 | 1,392 | 25.83 |
| Picking | 48 | 30.25 | 4 | (1) | 307 | 14.24 | 84 | 15.21 |
| Dyeing and finishing | 886 | 26.45 | 99 | 27.89 | 84 | 11.75 | 3 | (1) |
| Miscellaneous [2] | 1,660 | 29.63 | 403 | 25.31 | 465 | 14.74 | 169 | 16.85 |
| Total, weaving plants | 5,059 | 29.66 | 1,088 | 28.98 | 7,376 | 18.30 | 2,497 | 22.21 |
| Throwing plants: | | | | | | | | |
| Winding | 7 | (1) | | | 1,347 | 12.37 | 327 | 14.54 |
| Throwing | 789 | 18.71 | 177 | 17.54 | 998 | 13.45 | 177 | 14.36 |
| Quilling | 4 | (1) | 2 | (1) | 87 | 11.25 | 25 | 16.43 |
| Miscellaneous [2] | 409 | 20.50 | 27 | 16.86 | 141 | 13.40 | 37 | 13.99 |
| Total, throwing plants | 1,209 | 19.12 | 206 | 17.50 | 2,573 | 12.88 | 566 | 14.55 |
| Grand total | 6,268 | 26.93 | 1,294 | 26.44 | 9,949 | 16.29 | 3,063 | 19.74 |

[1] Median not computed where number is less than 15.
[2] Covers all nonproductive operations such as shipping, packing, cleaning, and repairing, including loom fixing.

The median earnings of men who worked overtime were only $2.48 higher than those of men working the regular full-time hours, although, as mentioned in the discussion of hours, one-fifth of them worked eight hours or more of overtime. In the case of the women, those working overtime had median earnings $3.25 lower than the median earnings of women working their regular scheduled hours. This is explained in part by the comparatively small proportion of overtime worked by women in the weaving and warping departments, where women's earnings were highest. Since the proportion of women working under time (41 per cent) was larger than the proportion working full time (37.5 per cent), the median earnings of the undertime group, $12.39, are considered more representative of the women's earnings than the $19.74 earned by those employed full time. The median earnings of the 1,294 men working full time were $26.44; of the 2,297 working overtime, $28.92; and of the 1,165 working undertime, $18.38. It will be noted that undertime had a more marked effect on median earnings than overtime.

In individual plants the median earnings of men in weaving plants ranged from $16.20 to $54.50, and of women from $10.13 to $25.80; in throwing plants the range for men was from $10.50 to $25.99, and for women from $3.41 to $26.44. No correlation was found between the number of employees in the plants and the median weekly earnings. The report points out that the type of operation carried on in the plant rather than the size of the establishment "was probably the deciding factor in the range of the individual plant median earnings."

Comparing the earnings in the different geographical districts, the highest for both men and women ($31.69 and $19.56, respectively) in weaving plants were found in the Easton area, and in throwing plants in the Wilkes-Barre area for men ($24.95), and in the Philadelphia area for women ($23.99). The lowest median earnings for men in weaving plants were those in the Scranton area ($25.21) and for women in the York area ($14.91); in throwing plants, the lowest earnings for both men and women ($15.93 and $10.39, respectively) occurred in the Sunbury area.

### Hours and Earnings of Children

DATA on the hours of work and earnings of children under 16 years of age were secured and tabulated separately but were not included in the body of the printed report. They were employed more generally in throwing than in weaving plants, and for the most part in unskilled occupations. Although only 4 per cent of all the workers included in the study were under 16 years of age, in the Philadelphia area 10 per cent of the workers were under 16 and in the Wilkes-Barre area 8 per cent. The Sunbury district had the lowest proportion of employed children—less than 1 per cent. Three-fourths of the children worked less than 48 hours per week, including 8 hours spent in continuation school. The median weekly earnings for all children were $6.54; of those in throwing plants, $7.68; and of those in weaving plants, $6.14.

## Wage Reduction in English Cotton-Textile Industry [1]

FOR some time past the English cotton-textile industry has declared itself to be in difficulties, expecially the section spinning American cotton. In 1928 a proposition was made to reduce wages materially and to stop the mills if the operatives refused to accept the cut, but when the matter was put to the vote it failed to receive the support of the four-fifths of the employers necessary for its adoption. This summer the matter was brought up again and met with more support. The Ministry of Labor Gazette (London) in its issue for August, 1929, thus states the reduction proposed:

> Since the last general adjustment of wage rates in November, 1922, the standard lists of wages have been subject to an addition, generally, of 95 per cent. This addition was continued by an agreement of June 5, 1923, which was terminable by one month's notice from either side. On June 21, 1929, the Federation of Master Cotton Spinners' Associations decided upon a reduction of 25 per cent on the standard piece price list rates of wages (i. e., from 95 to 70 per cent in the case of operatives hitherto receiving 95 per cent on standard lists, equivalent to a reduction of 12.82 per cent on current wages), the reduced rates to be paid for the first time on the pay day in the week ending August 3; proportionate decreases were to be made in the case of those workpeople who are not paid on the basis of a standard piece price list. The Cotton Spinners and Manufacturers' Association also decided on the same day to make an application for a like reduction. Notices to terminate the existing agreement were accordingly tendered forthwith to the operatives' organizations, together with invitations to meet the employers for discussion.

The discussions proved futile. The employers insisted that the condition of the industry demanded a reduction of wages, and the employees maintained that that condition was far too serious to be

[1] The data on which this article is based are from Ministry of Labor Gazette, August, 1929; and Manchester Guardian, issues of Aug. 16 and 23, 1929.

remedied by a wage cut. The latter held that what was needed was a thorough reorganization, and a wage reduction, while an immensely serious thing to workers receiving as little as they had earned for a long while, would have so little effect upon cost of production as to be practically useless. The Ministry of Labor strove to bring the two sides together, but both were resolute, and on July 29 the stoppage began. It was estimated that about 350,000 workers were involved.

The stoppage had two very serious aspects. Industry in general in England was in no condition to bear such an addition to the ranks of the unemployed, and the textile industry, in particular, was in no condition to risk the loss of its export trade to foreign competitors. The Ministry of Labor made earnest and persistent efforts to bring about a settlement, and the Prime Minister held a conference with representatives of the employers' organizations. By August 15 terms for ending the stoppage were accepted by both sides. A board of arbitration was to be formed, consisting of two members named by the employers and two by the employees, with an independent chairman chosen by these four, which should pass upon the question of whether the employers' claim for a reduction of wages should be sustained, and if so, to what extent. Should the others fail to agree, the chairman should have full power to act as umpire. Both employers and employees pledged themselves to abide by the decision, and pending the result of the arbitration the mills were to reopen on August 19 at the old rate of wages, which should continue until an award was made.

Work was accordingly resumed at once, the board, consisting of Sir Arthur Balfour and Sir Archibald Ross, nominated by the employers, and Mr. C. T. Cramp, secretary of the National Union of Railwaymen, and A. G. Walkden, secretary of the Railway Clerks Association, nominated by the employees, with Justice Rigby Smith as chairman, held its first meeting on August 21 and published its award on the evening of August 22. The decision which was in the nature of a compromise, is thus summarized by the Manchester Guardian:

> Stated briefly, the decision is: That the employers have made out a case for a reduction of wages; that the reduction shall be 12½ per cent on the standard piece price list rates of wages (as against 25 per cent demanded by the employers), which is equivalent to a reduction of 6.41 per cent on current wages (as against 12.82 per cent demanded by the employers); and an equivalent reduction in the wages of all operatives who are not paid by piece price lists.

In giving this decision the board emphasized that this reduction was proposed only as a partial relief to the industry while more far-reaching measures were devised.

> During the course of the case the evidence disclosed that the cotton industry in Lancashire was in a very depressed condition, and our attention was called to many factors which contributed to its present deplorable state, and it was contended on behalf of the employees that no reduction in wages should be made until the cotton industry had in other respects put its house in order. * * *
>
> The board have listened with interest to the arguments of both parties spreading over a wide field, and is not at all convinced that a reduction in wages is the only remedy for the present state of affairs, but it is convinced that something must immediately be done to alleviate the present position, and as an immediate easement it is unanimously of opinion that some reduction in the rate of wages should be made.

The board also gave it as its opinion that the committee whose appointment is noted elsewhere in this issue of the Labor Review should deal with the whole question of the reorganization of the cotton industry at the earliest possible moment.

# LABOR AWARDS AND DECISIONS

## Arbitration Award to Telegraphers on New York, Chicago & St. Louis Railroad

A BOARD of arbitration acting in the dispute between the New York, Chicago & St. Louis Railroad Co. and its employees in the telegraph, station, and tower service, on May 15, 1929, made an award increasing the rate of pay of the employees the equivalent of 3½ cents per hour per position.[1]

A dispute arose as to the distribution of the award as between the three lines or districts comprising the New York, Chicago & St. Louis Railroad. On July 16, 1929, the Order of Railroad Telegraphers requested the United States Board of Mediation to reconvene the board for the purpose of interpreting its award of May 15, 1929.

On August 14, 1929, the reconvened board made the following supplementary award:

The board of arbitration having been reconvened and having been specifically requested by both parties of the arbitration proceedings to determine the distribution of the equivalent of 3½ cents per hour per position as specified in its award of May 15, 1929, we, the undersigned, being a majority of the members of said reconvened board of arbitration, in pursuance of such request and the authority conferred upon us by both parties of the agreement to arbitrate, do, without predjudice, and in accordance with the subject matter considered in our original deliberations, further reaffirm that the distribution of the equivalent of 3½ cents per hour per position specified in the original award shall not be applied flat, and in order to more nearly equalize the inequalities and differentials existing between the three lines, adjudge that the equivalent of 2½ cents per hour per position shall be applied by the management and committee to the adjustment of the rates of pay of the employees of the Nickel Plate line or district, 4½ cents per hour per position to the adjustment of the rates of pay of the employees of the Lake Erie and Western line or district, and 4½ cents per hour per position to the adjustment of the rates of pay on the Clover Leaf line or district, and in such manner as may be determined between the management and committee as will establish just and equitable rates for such positions as are (or were at the time that the award became effective) in existence on the three lines or districts comprising the New York, Chicago & St. Louis Railroad.

B. C. Lewis, arbitrator for the employees, dissented.

[1] Labor Review, July, 1929, p. 158.

# UNEMPLOYMENT RELIEF AND STABILIZATION

## Precedents in Stabilizing Employment by Expansion of Public Works

SENATOR JONES reintroduced his bill "to create a prosperity reserve and to stabilize industry and employment by the expansion of public works during periods of unemployment and industrial depression," on April 23, 1929 (S. 626, 71st Cong., 1st sess.). This bill is similar to S. 2475, on which hearings were held before the Committee on Commerce of the United States Senate, April 1, 1928, and which was reported favorably to the Senate on April 18, 1928.[1] That this bill is not without precedent is shown by the State legislation outlined below. The first legislative action along this line was taken in Idaho and New Jersey in 1915. Since that time four other States (Pennsylvania, California, Louisiana, and Wisconsin) have passed measures designed to afford some means of employment in "hard times."

*Idaho.*—The Idaho act (Acts of 1915, ch. 27) authorized the board of county commissioners to provide "emergency employment" for unemployed United States citizens who had resided in the State uninterruptedly for six months and in the county for 90 days, and who did not possess property of a total value of more than $1,000. The emergency employment was to consist of work on the public highways "or such other work as they [the county commissioners] may determine." Provision of such work to any one applicant was limited to a period of 60 days in any fiscal year. Although the act provided that the expenses incurred for work performed under the act should be met by the county treasurer out of the current county funds, it also provided that 50 per cent of the amount so disbursed should be deducted by the State from the taxes levied by it upon the county. This latter clause resulted in the act's being held unconstitutional in 1916, on the ground that it diverted State funds for expenditure by the county in violation of the State constitution, which provided that such money could be paid out only on specific appropriation by the legislature. (Epperson *v.* Howell (1916), 28 Idaho, 338, 154 Pac. 621.)

*New Jersey.*—The New Jersey act (Acts of 1915, ch. 43) applies in cases where a city or municipality has set up an unemployment relief committee. In such cases the common council or body in charge of the various departments employing unskilled labor is authorized to hire such unskilled labor from "the needy poor" of the municipality. The rate of payment to such employees must be submitted to the State civil service commission for its approval.

*Pennsylvania.*—In 1917 the Pennsylvania Legislature passed an act (No. 411) "to provide increased opportunities for employment

[1] See Senate Report No. 836, 70th Cong.

in useful public works * * * during periods of extraordinary unemployment caused by industrial depression." For this purpose an "emergency public works fund" was established. The measure provided for an emergency public works commission, composed of the governor, State auditor, State treasurer, and State commissioner of labor and industry, to administer the act.

The procedure under the act was to be as follows:

SEC. 3. It shall be the duty of the said commission to proceed forthwith to ascertain and secure from the various departments, bureaus, boards, and commissions of this Commonwealth tentative plans for such extension of the public works of the State as shall be best adapted to supply increased opportunities for advantageous public labor during such periods of temporary unemployment; together with estimates of the amount, character, and duration of said employment, the number of employees who could be profitably used therein, together with rates of wages and such other information as the commission shall deem necessary.

SEC. 4. It shall be the duty of the industrial board of the department of labor and industry, in cooperation with the various bureaus of the said department, to keep constantly advised of industrial conditions throughout the Commonwealth as affecting the employment of labor; and whenever it shall be represented to the said board by the governor of the State, or the said board shall otherwise have reason to believe, that a period of extraordinary unemployment caused by industrial depression exists in the Commonwealth, it shall be the duty of the said board to immediately hold an inquiry into the facts relating thereto, and to find and report to the governor of the Commonwealth whether, in fact, such condition does exist.

SEC. 5. In the event that the industrial board shall report to the governor that a period of extraordinary unemployment caused by industrial depression does in fact exist within this Commonwealth, the said commission is hereby authorized to make such disposition and distribution of the said emergency public works fund, among the said several departments, bureaus, boards, and commissions of the Commonwealth, for such extension of the public works of the Commonwealth under the charge or direction thereof, including the purchase of materials and supplies necessary therefor, as shall, in the judgment and discretion of the said commission, be best adapted to advance the public interest by providing the maximum of public employment, in relief of the existing conditions of extraordinary unemployment, consistent with the most useful, permanent, and economical extension of the works aforesaid.

Sec. 6. It shall be the duty of the commissioner of labor and industry, immediately upon the publication, under this act, of a finding that a period of extraordinary unemployment due to industrial depression exists throughout this Commonwealth, to cause to be prepared by the appropriate bureaus of his department approved lists of applicants for public employment, and to secure from such applicants, or otherwise, full information as to their industrial qualifications, and to submit the same to the emergency public works commission for transmission to such departments, bureaus, boards, and commissions as shall avail themselves of the provisions of this act: *And it is further provided*, That no person shall be given employment in the works contemplated by this act who shall not be a citizen of the United States, and shall not have been a resident of the State of Pennsylvania for a period of six months prior to his or her application for said employment: *Provided further*, That this section shall not apply to such additional employees as shall, in the judgment of the head of said department, bureau, board or commission, be necessary to prepare the necessary plans for the said extensions, and to provide the materials and equipment therefor, or to supervise the conduct thereof.

The bill as passed by the legislature provided a sum of $50,000 to constitute the emergency fund, but this was cut to $40,000 by the governor, because of "insufficient State revenue."

This law was repealed in 1923 by Act No. 274, which provided for the reorganization of the executive departments of the State and which, by section 1710, gave the department of labor and industry the power to bring together employers and jobless employees, to

establish employment exchanges, and to supervise all public and private employment agencies, "to report on the extent of unemployment, the remedy therefor, and the means for the prevention thereof," and to aid in the "intelligent distribution of labor."

*California.*—In 1921 the California Legislature enacted a measure (ch. 246) almost identical with the 1917 Pennsylvania act. In the California law, however, the State bureau of labor statistics is named as the fact-finding body and the State board of control given the administration of the act. As to the persons to be given employment under the act, the measure provides that preference shall be given first to citizens of the State, then to citizens of other States, and finally, to aliens.

*Louisiana.*—A special act (No. 15) for the purpose of relieving the unemployment then existing by expanding public works was passed by the legislature of Louisiana in the extra session of 1921. This act directed the State authorities to "proceed at the earliest possible date with all contemplated public work and improvements."

*Wisconsin.*—An act practically identical with the California measure of 1921 was enacted in Wisconsin in 1923 (ch. 76). The State industrial commission was named as the fact-finding body under the act.

*Jones bill.*—The Jones bill provides as follows:

> The following sums are hereby authorized to be appropriated, for the purposes hereinafter specified, in addition to the amounts normally and usually appropriated for such purposes:
>
> (1) For carrying out the provisions of the act entitled "An act to provide that the United States shall aid the States in the construction of rural post roads, and for other purposes," approved July 11, 1916, and all acts amendatory thereof and supplementary thereto, $75,000,000;
>
> (2) For the preservation and maintenance of existing river and harbor works, and for the prosecution of such projects heretofore or hereafter authorized as may be most desirable in the interests of commerce and navigation, $50,000,000;
>
> (3) For prosecuting work of flood control in accordance with the provisions of the flood control acts, approved March 1, 1917, and March 4, 1923, $10,400,000;
>
> (4) For carrying into effect the provisions of the public buildings act, approved May 25, 1926, in respect of public buildings outside of the District of Columbia, $15,000,000.
>
> SEC. 2. No appropriation shall be made pursuant to the authorization contained in this act until such time as the President finds and communicates to the Congress that the volume, based upon value, of contracts awarded for construction work in the United States, has fallen 20 per cent for a 3-month period below the average of the corresponding 3-month periods of 1927 and 1928, the preceding three years.

## Absorption of Discharged Men's Clothing Cutters into Other Trades

IN AN article printed in the August, 1929, issue of The Journal of Political Economy entitled "Occupational Readjustment of Displaced Skilled Workmen," by Robert J. Myers of Grinnell College, the labor history of a group of 370 cutters in the men's clothing trades of Chicago is traced subsequent to their dismissal or voluntary retirement from their regular employment.

Mr. Myers points out that demand for low-priced clothing after the depression of 1921 led to revolutionary changes in Chicago clothing manufacture. Firms that had formerly cut one or two suits at a time cut the lower-grade product as many as 20 at a time, and fewer cutters were therefore necessary. By 1925, employed cutters in the Chicago market were working on an average of 30 to 35 hours a week under the plan of equal distribution of work provided by the collective agreement. Other cutters were wholly unemployed, having been dropped when shops were liquidated or left the local market.

### Cutters Covered by Study

THE study under review covered the employment history of two classes of cutters: (1) Those who lost their jobs through shutdowns in shops where they had been employed; and (2) those who were dismissed from or voluntarily left the firm of Hart Schaffner & Marx under a plan whereby each man dismissed received $500 and thereby gave up the right to his job. Those in the first class had the alternative of remaining in the trade and taking such temporary work as became available during busy seasons, or of leaving clothing manufacture for other work.

The workers in the Hart Schaffner & Marx shops were, under the collective agreement, entitled to share equally in the employment available. By 1926, however, the cutters in this firm were losing one day in every three; the union therefore agreed to the dismissal of a number of cutters on condition that each man losing his job be paid $500. This payment, known as a dismissal wage, was made to 236 cutters, some of whom were designated for dismissal by the company while the others volunteered to go. About one-fifth of the cost incurred was borne by the unemployment insurance fund, and the balance by the firm. The amount of the dismissal wage was not expected to measure accurately the value of the job.

### Trades Entered

THE present study undertakes to find out (1) What trades these ex-cutters are engaged in, with supplementary information as to how many trades they have worked in since leaving cutting, and the amount of time lost; (2) whether the cutters who received the dismissal wage are better off than those who did not; and (3) whether men of any particular age found work with greater ease than those in other age groups.

Of the 370 cutters for whom a work history was obtained, 217 were ex-cutters from the Hart Schaffner & Marx shops and 153 were from other shops. The record for the early summer of 1928, when all the men had been out of their trade for at least a year and a half, shows that 75, or 20.3 per cent, were engaged in some kind of cutting and 42, or 11.4 per cent, were not employed at all. The complete occupational distribution is shown in the table following.

TABLE 1.—NUMBER AND PER CENT OF EX-CUTTERS ENGAGED IN SPECIFIED OCCUPATIONS IN EARLY SUMMER OF 1928

| Occupation | Number | Per cent of total |
|---|---|---|
| Bartenders and bootleggers | 5 | 1.3 |
| Caretakers, janitors, messengers, etc. | 15 | 4.0 |
| Cutters: | | |
| Men's clothing— | | |
| Chicago, regular work, union | 16 | 4.3 |
| Chicago, regular work, non-union | 7 | 1.9 |
| Chicago, temporary work | 20 | 5.5 |
| Chicago, job permanence unknown | 9 | 2.4 |
| Out of city | 9 | 2.4 |
| Allied trades | 14 | 3.8 |
| Total | 75 | 20.3 |
| Drivers, truckers, etc. | 39 | 10.5 |
| Factory and industrial workers | 17 | 4.6 |
| Farmers | 1 | .3 |
| Firemen | 1 | .3 |
| Grocers, confectioners, etc. | 26 | 7.0 |
| Laborers | 8 | 2.2 |
| Mailmen | 1 | .3 |
| Office workers and executives | 6 | 1.6 |
| Politicians | 10 | 2.7 |
| Professional men | 7 | 1.9 |
| Real estate and insurance agents | 22 | 5.9 |
| Salesmen, not elsewhere classified: | | |
| Commission | 10 | 2.7 |
| Salaried or owning | 29 | 7.9 |
| Manner of payment unknown | 15 | 4.0 |
| Total | 54 | 14.6 |
| Skilled workmen: | | |
| Bakers | 1 | 0.3 |
| Barbers | 3 | .8 |
| Carpenters | 4 | 1.1 |
| Electricians | 1 | .3 |
| Embroidery designers | 1 | .3 |
| Flooring layers | 1 | .3 |
| Glaziers | 1 | .3 |
| Machinists | 3 | .8 |
| Painters and paper hangers | 6 | 1.6 |
| Plumbers | 1 | .3 |
| Printers and bookbinders | 2 | .5 |
| Total | 24 | 6.5 |
| Tailors and cleaners | 17 | 4.6 |
| Not employed: | | |
| Dead | 8 | 2.2 |
| Retired | 5 | 1.3 |
| Ill, unemployable | 3 | .8 |
| Unemployed, seeking work | 26 | 7.0 |
| Total | 42 | 11.4 |
| Grand total | 370 | 100.0 |

The following statement covering 241 cutters shows that they have worked in from one to six trades since leaving their earlier employment:

| | Number | Per cent |
|---|---|---|
| One trade | 129 | 53.5 |
| Two trades | 53 | 21.9 |
| Three trades | 29 | 12.0 |
| Four trades | 22 | 9.2 |
| Five trades | 6 | 2.5 |
| Six trades | 2 | .9 |
| Total | 241 | 100.0 |

Of 276 cutters, 84 (30.4 per cent) reported earnings above the earlier level; 128 (46.4 per cent) reported earnings below that level; and 64 (23.2 per cent) the same earnings. Sixty-three cutters of a total of 328 stated that they owned their business. Among 272 cutters a majority, or 166, wished to return to cutting while 106 did not.

## Time Loss

THE amount of time lost between dismissal from jobs and finding new work by 240 cutters appears in Table 2.

TABLE 2.—NUMBER AND PER CENT OF EX-CUTTERS UNEMPLOYED SPECIFIED TIME BETWEEN LEAVING CUTTING AND SECURING OTHER REGULAR EMPLOYMENT

| Months lost | Number of cutters | Per cent of total | Months lost | Number of cutters | Per cent of total |
|---|---|---|---|---|---|
| No time lost | 69 | 28.7 | 8 months | 7 | 2.9 |
| 1 mohth | 27 | 11.3 | 9 months | 4 | 1.7 |
| 2 months | 27 | 11.3 | 10 months | 1 | .4 |
| 3 months | 18 | 7.5 | 11 months | 1 | .4 |
| 4 months | 11 | 4.6 | 12 months | 12 | 5.0 |
| 5 months | 9 | 3.7 | More than 12 months | 31 | 12.9 |
| 6 months | 11 | 4.6 | | | |
| 7 months | 12 | 5.0 | Total | 240 | 100.0 |

## Relative Financial Position of the Two Classes of Cutters

PRACTICALLY the same percentage of cutters (or 25 per cent) from the Hart Schaffner & Marx shops who received the dismissal wage and of cutters from other shops returned to the cutting trade. The distribution of the two groups among other trades is also similar.

The investigator states that "the other available criteria for comparison offer some, but little, evidence that the paid-off men were prospering more than the others." For instance, a smaller proportion of the paid-off men than of those who were not paid off had worked in only one trade, but fewer paid-off men worked in three trades or more.[2] Again the paid-off men lost an average of only 5 months between jobs as compared with 5.8 months for the others, and this in spite of the fact that some men admitted taking a vacation on their dismissal wage before seeking work.

The Hart Schaffner & Marx men had a slight advantage over the others as regards wages and ownership of business. The author states that: "Taking all of these measures together, the evidence indicates perhaps that the men from the Hart Schaffner & Marx factory have been a bit more successful than the men from other houses. The advantage indicated is very slight but, since the data are not as complete as could be desired and since the groups are not entirely comparable, it is scarcely safe to judge the effectiveness of the dismissal wage."

## Age in Relation to Ease of Finding Employment

THE firm of Hart Schaffner & Marx was in a position to supply information as to the ages of a number of cutters at the time they left the company. For a total of 198 of these men five indexes of welfare are shown in Table 3. Measurement on this basis indicates that men between 35 and 39 were most successful in adjusting themselves to new work.

[2] The author points out that this fact must be discounted, as the Hart Schaffner & Marx men had been out of work a shorter time than the others.

TABLE 3.—FIVE INDEXES OF THE WELFARE OF HART SCHAFFNER & MARX EX-CUTTERS, CLASSIFIED BY AGES, AS OF SUMMER OF 1926

| Item considered | Total answers | Men whose ages were— | | | | | |
|---|---|---|---|---|---|---|---|
| | | 20 to 24 | 25 to 29 | 30 to 34 | 35 to 39 | 40 to 44 | 45 to 49 |
| *Trades entered* | | | | | | | |
| Number of men indicating trades engaged in since leaving cutting | 150 | 11 | 29 | 53 | 35 | 13 | 9 |
| Average number of trades engaged in | 1.9 | 2.3 | 1.9 | 2.0 | 1.7 | 1.8 | 2.4 |
| *Time loss* | | | | | | | |
| Number of men indicating time lost before securing regular employment [1] | 117 | 8 | 22 | 39 | 33 | 9 | 6 |
| Average number of months lost | 4.8 | 3.8 | 8.2 | 4.1 | 2.6 | 5.2 | 9.8 |
| *Trend of earnings* | | | | | | | |
| Number of men indicating trend of earnings since leaving cutting | 163 | 12 | 34 | 55 | 38 | 14 | 10 |
| Percentage earning: | | | | | | | |
| More | 34 | 25 | 29 | 34 | 50 | 36 | |
| Less | 46 | 50 | 53 | 42 | 34 | 36 | 90 |
| Same | 20 | 25 | 18 | 24 | 16 | 28 | 10 |
| *Ownership of business* | | | | | | | |
| Number of men indicating whether they owned business | 175 | 12 | 39 | 59 | 41 | 14 | 10 |
| Percentage owning | 20 | 0 | 18 | 20 | 32 | 22 | |
| Percentage not owning | 80 | 100 | 82 | 80 | 68 | 78 | 100 |
| *Attitude toward return* | | | | | | | |
| Number of men indicating attitude toward returning | 156 | 9 | 33 | 53 | 38 | 13 | 10 |
| Percentage wanting to go back | 57 | 56 | 67 | 58 | 47 | 46 | 70 |
| Percentage not wanting to go back | 43 | 44 | 33 | 42 | 53 | 54 | 30 |

[1] This item excludes all men whose first occupation was selling real estate or insurance or any goods on a commission basis; men whose first occupation is not known are also eliminated. Commission jobs usually can be secured with ease and the time lost before getting such jobs does not have the same significance as that lost before obtaining a salaried job.

## A New Method of Placing Displaced Men

ABOUT the end of 1928 the firm of Messrs. Rowntree, of York, England, found it necessary to reduce its force, owing to the introduction of labor-saving machinery, to the extent of about 120 men. The firm was unwilling simply to dismiss them and let them shift for themselves, and therefore advertised that it would pay £2 ($9.73) per week for a year to any suitable firm employing one of these workers, provided that the new employer paid the man not less than £2 15s. ($13.38) a week. The Manchester Guardian, in its issue for August 12, 1929, gives an account of an interview with a member of the firm concerning the outcome of its efforts. About half of the men, Mr. Rowntree said, were between 50 and 60, and these were at once given a retirement allowance of 25s. ($6.08) a week, which they were at liberty to supplement in any way they could.

Of the others, 24 men have been employed by other firms. Most of these are engaged in a new factory established in a garden city where there is not enough local labor.

Then we were compelled to recognize that it was only reasonable, if we were prepared to pay £2 [$9.73] a week to an employer to use our men, we ought to be willing to pay as much to the man himself if he was ready to develop his own

powers. So we agreed to advance to those who were ready to set up in business for themselves capital up to £104 [$506]. We not only advanced capital, but we gave the men every assistance—technical, advisory, and by getting our accountants to go into figures, etc., before the undertaking was launched. As a result 33 men have set up in industry. With the exception of two (both of whom made the mistake of absorbing their profits in liquid form) all these are making good.

Asked whether he considered the experiment had been worth while, Mr. Rowntree replied that he considered it had not only been an economic success, but had had a beneficial effect upon the rest of their working force.

# TREND OF EMPLOYMENT

## Summary for August, 1929

EMPLOYMENT increased 1.1 per cent in August, 1929, as compared with July and pay-roll totals increased 3.9 per cent, according to reports made to the Bureau of Labor Statistics.

The industrial groups surveyed, the number of establishments reporting in each group, the number of employees covered, and the total pay rolls for one week, for both July and August, together with the per cents of change in August, are shown in the following table:

SUMMARY OF EMPLOYMENT AND PAY-ROLL TOTALS, JULY AND AUGUST, 1929, BY INDUSTRIAL GROUPS

| Industrial group | Establishments | Employment | | Per cent of change | Pay roll in one week | | Per cent of change |
|---|---|---|---|---|---|---|---|
| | | July, 1929 | August, 1929 | | July, 1929 | August, 1929 | |
| **1. Manufacturing** | **12,594** | **3,520,352** | **3,530,342** | [1] **+0.4** | **$93,289,385** | **$97,271,480** | [1] **+4.0** |
| **2. Coal mining** | **1,247** | **268,531** | **280,513** | **+4.5** | **6,295,785** | **7,116,079** | **+13.0** |
| Anthracite | 162 | 93,716 | 102,661 | +9.5 | 2,278,454 | 2,761,217 | +21.2 |
| Bituminous | 1,085 | 174,815 | 177,852 | +1.7 | 4,017,331 | 4,354,862 | +8.4 |
| **3. Metalliferous mining** | **321** | **58,776** | **59,797** | **+1.7** | **1,738,252** | **1,757,070** | **+1.1** |
| **4. Quarrying and nonmetallic mining** | **666** | **38,109** | **38,847** | **+1.9** | **1,004,276** | **1,057,819** | **+5.3** |
| **5. Public utilities** | **9,070** | **716,097** | **724,605** | **+1.2** | **21,221,904** | **21,122,013** | **−0.5** |
| **6. Trade** | **6,905** | **260,045** | **260,325** | **+0.1** | **6,738,925** | **6,693,629** | **−0.7** |
| Wholesale | 1,645 | 59,804 | 60,329 | +0.9 | 1,826,469 | 1,817,464 | −0.5 |
| Retail | 5,260 | 200,241 | 199,996 | −0.1 | 4,912,456 | 4,876,165 | −0.7 |
| **7. Hotels** | **1,677** | **143,366** | **145,528** | **+1.5** | [2] **2,402,789** | [2] **2,393,248** | **−0.4** |
| **8. Canning and preserving** | **432** | **43,358** | **63,174** | **+45.7** | **679,150** | **1,119,858** | **+64.9** |
| **Total** | **32,912** | **5,048,634** | **5,103,131** | **+1.1** | **133,370,466** | **138,531,196** | **+3.9** |

RECAPITULATION BY GEOGRAPHIC DIVISIONS

| GEOGRAPHIC DIVISION | | | | | | | |
|---|---|---|---|---|---|---|---|
| New England [3] | 2,293 | 475,024 | 475,282 | +0.1 | $12,123,968 | $12,154,569 | +0.2 |
| Middle Atlantic [4] | 5,936 | 1,400,044 | 1,418,015 | +1.3 | 39,078,285 | 40,293,648 | +3.9 |
| East North Central [5] | 7,794 | 1,607,791 | 1,609,999 | +0.1 | 45,678,753 | 48,674,992 | +6.1 |
| West North Central [6] | 3,815 | 315,683 | 319,793 | +1.3 | 8,019,801 | 8,137,536 | +1.5 |
| South Atlantic [7] | 3,905 | 480,962 | 486,532 | +1.2 | 9,966,801 | 10,218,865 | +2.5 |
| East South Central [8] | 1,994 | 210,246 | 213,312 | +1.5 | 4,114,858 | 4,245,935 | +3.2 |
| West South Central [9] | 2,291 | 176,347 | 179,441 | +1.8 | 4,062,071 | 4,133,416 | +1.8 |
| Mountain [10] | 1,275 | 101,181 | 104,186 | +3.0 | 2,855,020 | 2,862,176 | +0.3 |
| Pacific [11] | 3,609 | 281,356 | 296,571 | +5.4 | 7,470,909 | 7,810,059 | +4.5 |
| **All divisions** | **32,912** | **5,048,634** | **5,103,131** | **+1.1** | **133,370,466** | **138,531,196** | **+3.9** |

[1] Weighted per cent of change for the combined 54 manufacturing industries repeated from Table 2, p. 196; the remaining per cents of change including total, are unweighted.
[2] Cash payments only; see text, p. 208.
[3] Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont.
[4] New Jersey, New York, Pennsylvania.
[5] Illinois, Indiana, Michigan, Ohio, Wisconsin.
[6] Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, South Dakota.
[7] Delaware, District of Columbia, Florida, Georgia, Maryland, North Carolina, South Carolina, Virginia, West Virginia.
[8] Alabama, Kentucky, Mississippi, Tennessee.
[9] Arkansas, Louisiana, Oklahoma, Texas.
[10] Arizona, Colorado, Idaho, Montana, New Mexico, Nevada, Utah, Wyoming.
[11] California, Oregon, Washington.

August regularly shows an upward trend of employment in manufacturing industries, following the inventory and repair season of July; coal mining anticipates autumn demands by increased activities; and canning usually approaches its peak of employment in August.

Every group covered by this report showed a substantial gain in employment in August, except retail trade, which was practically unchanged. The outstanding increase in employment in August, among the increases in each of the 9 geographic divisions, was 5.4 per cent in the Pacific division, while the smallest increase was 0.1 and was shown both by the New England and the East North Central divisions.

For convenient reference the latest data available relating to all employees, excluding executives and officials, on Class I Railroads, drawn from Interstate Commerce Commission reports, are shown in the following statement. These reports are for the months of June and July instead of for July and August, consequently the figures can not be combined with those presented in the foregoing table:

EMPLOYMENT AND PAY-ROLL TOTALS, CLASS I RAILROADS

| Industry | Employment | | Per cent of change | Amount of pay roll in entire month | | Per cent of change |
|---|---|---|---|---|---|---|
| | June 15, 1929 | July 15, 1929 | | June, 1929 | July, 1929 | |
| Class I railroads | 1,719,274 | 1,727,857 | +0.5 | $237,758,344 | $246,903,206 | +3.9 |

The total number of employees included in this summary is 6,831,000 whose combined earnings in one week amounted to over $194,000,000.

## 1. Employment in Selected Manufacturing Industries in August, 1929

### Comparison of Employment and Pay-Roll Totals in Manufacturing Industries, July and August, 1929

EMPLOYMENT in manufacturing industries *increased* 0.4 per cent in August as compared with July, while pay-roll totals *increased* 4 per cent. August employment stood at a considerably higher level in 1929, than in any year since 1923, a year of great manufacturing activity, with one exception—August, 1926, when employment was practically on a par with 1929. Pay-roll totals in August, 1929, made a greater gain over July than in any year for which the bureau has records.

The Bureau of Labor Statistics' weighted index of employment in *manufacturing* industries for August, 1929, is 98.6, as compared with 98.2 for July, 1929, and 93.6 for August, 1928; the weighted index of pay-roll totals for August, 1929, is 102.1, as compared with 98.2 for July, 1929, and 94.2 for August, 1928.

The food *group* of industries as a whole showed slightly decreased employment in August; the textile *group* reported a slight increase, with woolen goods, women's clothing, and millinery and lace goods outstanding; the iron and steel *group* fell off in employment, owing to a sizable drop in foundry and machine-shop products which increases in the iron and steel *industry* and steam fittings and stoves did not overcome; seasonal increases appeared in furniture, boots and shoes, fertilizers, pottery, glass, and wagons. The automobile industry fell off 2.4 per cent in employment but gained 16.2 per cent in pay-roll totals. The prosperous condition of the machine-tool industry was clearly shown by a drop in employment of *only* 1.5 per cent, in place of the usual August drop of from 5 to 11 per cent shown in previous years.

The rayon and radio industries which are not yet included in the bureau's indexes, both added to their employees in August; the rayon increase was 2.3 per cent and the radio increase was 18.6 per cent.

The report for August reflects conditions in 12,543 establishments in 54 of the chief manufacturing industries of the United States. These establishments employed 3,477,550 workers whose combined earnings in one week were $96,124,530. These employees represent 54 per cent of all employees in the 54 industries covered, and over 41 per cent of the total employees in all manufacturing industries of the United States.

There was a total increase of 9,990 employees in August over July, which resulted in very small changes in each geographic division. The changes were increases in 7 of the 9 divisions, with decreases of 0.2 per cent and 0.3 per cent in the New England and East North Central divisions, respectively.

TABLE 1.—COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS IN IDENTICAL MANUFACTURING ESTABLISHMENTS IN JULY AND AUGUST, 1929

| Industry | Establishments | Number on pay roll | | Per cent of change | Amount of pay roll (one week) | | Per cent of change |
|---|---|---|---|---|---|---|---|
| | | July, 1929 | August, 1929 | | July, 1929 | August, 1929 | |
| **Food and kindred products** | **1,844** | **226,483** | **226,702** | (1) | **$5,943,525** | **$5,910,156** | (1) |
| Slaughtering and meat packing | 205 | 86,704 | 85,866 | −1.0 | 2,306,522 | 2,216,755 | −3.9 |
| Confectionery | 295 | 28,608 | 30,213 | +5.6 | 515,923 | 571,381 | +10.7 |
| Ice cream | 323 | 14,561 | 14,262 | −2.1 | 486,533 | 466,398 | −4.1 |
| Flour | 339 | 16,448 | 16,746 | +1.8 | 437,441 | 460,566 | +5.3 |
| Baking | 667 | 69,043 | 68,175 | −1.3 | 1,868,224 | 1,842,751 | −1.4 |
| Sugar refining, cane | 15 | 11,119 | 11,440 | +2.9 | 328,882 | 352,305 | +7.1 |
| **Textiles and their products** | **2,144** | **594,230** | **596,355** | (1) | **11,316,515** | **11,632,901** | (1) |
| Cotton goods | 476 | 208,344 | 204,226 | −2.0 | 3,204,222 | 3,114,365 | −2.8 |
| Hosiery and knit goods | 328 | 92,626 | 93,368 | +0.8 | 1,696,327 | 1,767,269 | +4.2 |
| Silk goods | 286 | 66,272 | 66,613 | +0.5 | 1,377,493 | 1,412,016 | +2.5 |
| Woolen and worsted goods | 192 | 58,906 | 60,673 | +3.0 | 1,296,708 | 1,350,717 | +4.2 |
| Carpets and rugs | 27 | 17,913 | 18,342 | +2.4 | 439,957 | 465,965 | +5.9 |
| Dyeing and finishing textiles | 116 | 33,942 | 33,423 | −1.5 | 809,184 | 820,768 | +1.4 |
| Clothing, men's | 309 | 65,401 | 66,834 | +2.2 | 1,505,512 | 1,585,560 | +5.3 |
| Shirts and collars | 112 | 18,687 | 19,116 | +2.3 | 296,278 | 300,496 | +1.4 |
| Clothing, women's | 212 | 21,381 | 22,189 | +3.8 | 461,142 | 551,994 | +19.7 |
| Millinery and lace goods | 86 | 10,758 | 11,571 | +7.6 | 229,692 | 263,751 | +14.8 |
| **Iron and steel and their products** | **1,898** | **733,775** | **730,418** | (1) | **22,103,503** | **22,694,708** | (1) |
| Iron and steel | 200 | 280,785 | 283,677 | +1.0 | 8,707,619 | 9,225,671 | +5.9 |
| Cast-iron pipe | 38 | 11,856 | 12,043 | +1.6 | 285,962 | 291,328 | +1.9 |
| Structural ironwork | 164 | 27,404 | 28,075 | +2.4 | 809,166 | 856,587 | +5.9 |
| Foundry and machine-shop products | 1,051 | 292,159 | 283,685 | −2.9 | 8,827,200 | 8,764,798 | −0.7 |
| Hardware | 70 | 31,881 | 31,109 | −2.4 | 790,850 | 802,653 | +1.5 |
| Machine tools | 151 | 41,923 | 41,301 | −1.5 | 1,349,323 | 1,321,755 | −2.0 |
| Steam fittings and steam and hot-water heating apparatus | 111 | 30,069 | 31,647 | +5.2 | 848,378 | 913,719 | +7.7 |
| Stoves | 113 | 17,698 | 18,881 | +6.7 | 485,005 | 518,197 | +6.8 |
| **Lumber and its products** | **1,403** | **248,000** | **252,606** | (1) | **5,380,051** | **5,544,342** | (1) |
| Lumber, sawmills | 654 | 147,237 | 149,359 | +1.4 | 3,047,556 | 3,032,385 | −0.5 |
| Lumber, millwork | 332 | 36,897 | 36,759 | −0.4 | 848,063 | 872,496 | +2.9 |
| Furniture | 417 | 63,866 | 66,488 | +4.1 | 1,484,432 | 1,639,461 | +10.4 |
| **Leather and its products** | **439** | **136,230** | **141,275** | (1) | **3,154,763** | **3,388,511** | (1) |
| Leather | 128 | 26,759 | 27,088 | +1.2 | 680,482 | 708,726 | +4.2 |
| Boots and shoes | 311 | 109,471 | 114,187 | +4.3 | 2,474,281 | 2,679,785 | +8.3 |
| **Paper and printing** | **1,215** | **208,960** | **209,785** | (1) | **6,936,571** | **7,021,017** | (1) |
| Paper and pulp | 211 | 58,753 | 59,110 | +0.6 | 1,573,117 | 1,623,066 | +3.2 |
| Paper boxes | 175 | 18,327 | 18,503 | +1.0 | 420,415 | 423,381 | +0.7 |
| Printing, book and job | 379 | 46,942 | 47,082 | +0.3 | 1,566,521 | 1,581,144 | +0.9 |
| Printing, newspapers | 450 | 84,938 | 85,090 | +0.2 | 3,376,518 | 3,393,426 | +0.5 |

See footnotes at end of table.

TABLE 1.—COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS IN IDENTICAL MANUFACTURING ESTABLISHMENTS IN JULY AND AUGUST, 1929—Continued

| Industry | Establishments | Number on pay roll | | Per cent of change | Amount of pay roll (one week) | | Per cent of change |
|---|---|---|---|---|---|---|---|
| | | July, 1929 | August, 1929 | | July, 1929 | August, 1929 | |
| **Chemicals and allied products** | **385** | **97,884** | **100,147** | (1) | **$2,957,190** | **$3,004,373** | (1) |
| Chemicals | 143 | 36,962 | 37,641 | +1.8 | 1,030,095 | 1,047,279 | +1.7 |
| Fertilizers | 167 | 7,921 | 8,670 | +9.5 | 164,597 | 167,909 | +2.0 |
| Petroleum refining | 75 | 53,001 | 53,836 | +1.6 | 1,762,498 | 1,789,185 | +1.5 |
| **Stone, clay, and glass products** | **1,009** | **127,739** | **131,745** | (1) | **3,174,341** | **3,405,425** | (1) |
| Cement | 113 | 25,366 | 25,321 | −0.2 | 729,877 | 753,989 | +3.3 |
| Brick, tile, and terra cotta | 640 | 44,040 | 44,059 | +(2) | 1,047,133 | 1,068,255 | +2.0 |
| Pottery | 119 | 17,685 | 18,658 | +5.5 | 395,193 | 452,570 | +14.5 |
| Glass | 137 | 40,648 | 43,707 | +7.5 | 1,002,138 | 1,130,611 | +12.8 |
| **Metal products, other than iron and steel** | **221** | **56,754** | **56,577** | (1) | **1,490,398** | **1,522,793** | (1) |
| Stamped and enameled ware | 70 | 19,352 | 19,367 | +0.1 | 452,484 | 473,154 | +4.6 |
| Brass, bronze, and copper products | 151 | 37,402 | 37,210 | −0.5 | 1,037,824 | 1,049,639 | +1.1 |
| **Tobacco products** | **250** | **62,131** | **63,800** | (1) | **1,043,104** | **1,074,207** | (1) |
| Chewing and smoking tobacco and snuff | 26 | 7,752 | 7,883 | +1.7 | 131,162 | 133,859 | +2.1 |
| Cigars and cigarettes | 224 | 54,379 | 55,917 | +2.8 | 911,942 | 940,348 | +3.1 |
| **Vehicles for land transportation** | **1,263** | **619,387** | **609,855** | (1) | **18,175,054** | **20,502,271** | (1) |
| Automobiles | 217 | 447,829 | 437,202 | −2.4 | 12,997,169 | 15,098,523 | +16.2 |
| Carriages and wagons | 52 | 1,320 | 1,433 | +8.6 | 28,055 | 31,157 | +11.1 |
| Car building and repairing, electric-railroad | 440 | 27,513 | 27,552 | +0.1 | 853,451 | 856,937 | +0.4 |
| Car building and repairing, steam-railroad | 554 | 142,725 | 143,668 | +0.7 | 4,296,379 | 4,515,654 | +5.1 |
| **Miscellaneous industries** | **523** | **408,779** | **411,077** | (1) | **11,614,460** | **11,570,776** | (1) |
| Agricultural implements | 79 | 30,006 | 28,550 | −4.9 | 863,388 | 847,909 | −1.8 |
| Electrical machinery, apparatus, and supplies | 186 | 209,639 | 210,634 | +0.5 | 6,238,706 | 6,207,045 | −0.5 |
| Pianos and organs | 75 | 7,030 | 6,605 | −6.0 | 203,816 | 192,156 | −5.7 |
| Rubber boots and shoes | 13 | 17,662 | 18,343 | +3.9 | 434,818 | 446,853 | +2.8 |
| Automobile tires | 38 | 60,738 | 58,240 | −4.1 | 1,774,695 | 1,685,032 | −5.1 |
| Shipbuilding | 81 | 36,750 | 35,913 | −2.3 | 1,097,665 | 1,044,831 | −4.8 |
| Rayon [3] | 11 | 17,856 | 18,274 | +2.3 | 370,243 | 387,214 | +4.6 |
| Radio [3] | 40 | 29,098 | 34,518 | +18.6 | 631,129 | 759,736 | +20.4 |
| **All industries** | **12,594** | **3,520,352** | **3,530,342** | (1) | **93,289,385** | **97,271,480** | (1) |

## RECAPITULATION BY GEOGRAPHIC DIVISIONS

| GEOGRAPHIC DIVISION [4] | | | | | | | |
|---|---|---|---|---|---|---|---|
| New England | 1,493 | 400,065 | 399,304 | −0.2 | $10,022,702 | $10,035,832 | +0.1 |
| Middle Atlantic | 2,899 | 940,073 | 944,771 | +0.5 | 26,603,681 | 27,283,707 | +2.6 |
| East North Central | 3,159 | 1,247,018 | 1,242,854 | −0.3 | 35,741,266 | 38,590,663 | +8.0 |
| West North Central | 1,128 | 182,131 | 183,532 | +0.8 | 4,663,114 | 4,765,916 | +2.2 |
| South Atlantic | 1,604 | 345,563 | 349,477 | +1.1 | 6,709,781 | 6,913,844 | +3.0 |
| East South Central | 611 | 131,483 | 133,385 | +1.4 | 2,478,976 | 2,573,535 | +3.8 |
| West South Central | 722 | 105,587 | 107,376 | +1.7 | 2,427,552 | 2,482,708 | +2.3 |
| Mountain | 237 | 34,868 | 35,741 | +2.5 | 976,245 | 958,566 | −1.8 |
| Pacific | 741 | 133,564 | 133,902 | +0.3 | 3,666,068 | 3,666,709 | +(2) |
| **All divisions** | **12,594** | **3,520,352** | **3,530,342** | (1) | **93,289,385** | **97,271,480** | (1) |

[1] The per cent of change has not been computed for the reason that the figures in the preceding columns are unweighted and refer only to the establishments reporting; for the weighted per cent of change, wherein proper allowance is made for the relative importance of the several industries, so that the figures may represent all establishments of the country in the industries here represented, see Table 2.

[2] Less than one-tenth of 1 per cent.

[3] The rayon industry was surveyed for the first time for the January–February comparison, and the radio industry for the March–April comparison, and, since the data for computing relative numbers are not yet available, these industries are not included in the bureau's indexes of employment and pay-roll totals. The total figures for all manufacturing industries given in the text, p. 194, do not include rayon or radio.

[4] See footnotes 3 to 11, p. 192.

TABLE 2.—PER CENT OF CHANGE, JULY TO AUGUST, 1929, 12 GROUPS OF MANUFACTURING INDUSTRIES AND TOTAL OF ALL INDUSTRIES

[Computed from the index numbers of each group, which are obtained by weighting the index numbers of the several industries of the group, by the number of employees, or wages paid, in the industries]

| Group | Per cent of change, July to August, 1929 | | Group | Per cent of change, July to August, 1929 | |
|---|---|---|---|---|---|
| | Number on pay roll | Amount of pay roll | | Number on pay roll | Amount of pay roll |
| Food and kindred products | −0.1 | −0.6 | Metal products, other than iron and steel | −0.3 | +2.0 |
| Textiles and their products | +0.8 | +4.3 | Tobacco products | +2.6 | +3.0 |
| Iron and steel and their products | −0.7 | +2.6 | Vehicles for land transportation | −0.9 | +10.9 |
| Lumber and its products | +1.9 | +3.1 | Miscellaneous industries | [1]−0.9 | [1]−2.0 |
| Leather and its products | +3.7 | +7.3 | | | |
| Paper and printing | +0.5 | +1.3 | **All industries** | [1]**+0.4** | [1]**+4.0** |
| Chemicals and allied products | +2.4 | +1.6 | | | |
| Stone, clay, and glass products | +2.8 | +7.1 | | | |

[1] Not including rayon and radio; see note 3, p. 195.)

## Comparison of Employment and Pay-Roll Totals in Manufacturing Industries, in August, 1929, and August, 1928

THE LEVEL of employment in *manufacturing* industries in August, *1929*, was 5.3 per cent *higher* than in August, *1928*, and employees' earnings were 8.4 per cent *greater*, this being the eleventh month showing a higher level of employment than in the same month of the preceding year.

Ten of the 12 groups of industries and 39 of the 54 separate industries had more employees at the end of this 12-month period than at the beginning; the stone-clay-glass and tobacco groups and each of their 6 component industries showed decreased employment.

The outstanding gains in this yearly comparison, as in recent months, were in machine tools, electrical machinery, and shipbuilding, and, in a less degree, petroleum refining, foundry and machine-shop products, and agricultural implements. Automobiles in August, 1929, for the first time in 21 months showed a falling off in employment as compared with the same month of the preceding year.

Each of the 9 geographic divisions showed marked increases in August, 1929, both in employment and pay-roll totals, as compared with August, 1928, the greatest gains, 9.2 per cent and 11.5 per cent in the two items, having been in the Middle Atlantic division and the smallest gains, 2.5 per cent and 1.2 per cent, in the Pacific division.

TABLE 3.—COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS IN MANUFACTURING INDUSTRIES AUGUST, 1929, WITH AUGUST, 1928

[The per cents of change for each of the 12 groups of industries and for the total of all industries are weighted in the same manner as are the per cents of change in Table 2, p. 196]

| Industry | Per cent of change, August, 1929, compared with August, 1928 | | Industry | Per cent of change, August, 1929, compared with August, 1928 | |
|---|---|---|---|---|---|
| | Number on pay roll | Amount of pay roll | | Number on pay roll | Amount of pay roll |
| **Food and kindred products** | +2.6 | +4.0 | **Chemicals and allied products** | +11.1 | +9.9 |
| Slaughtering and meat packing | +2.8 | +4.4 | Chemicals | +6.5 | +5.7 |
| Confectionery | +2.9 | +5.5 | Fertilizers | +3.5 | −0.4 |
| Ice cream | −2.4 | −4.0 | Petroleum refining | +17.4 | +15.1 |
| Flour | +3.6 | +6.0 | | | |
| Baking | +2.3 | +3.2 | **Stone, clay, and glass products** | −3.3 | −4.6 |
| Sugar refining, cane | +3.5 | +4.8 | Cement | −8.7 | −8.8 |
| | | | Brick, tile, and terra cotta | −2.7 | −5.8 |
| **Textiles and their products** | +3.5 | +5.2 | Pottery | −3.0 | −3.5 |
| Cotton goods | +3.4 | +6.9 | Glass | −0.2 | +1.0 |
| Hosiery and knit goods | +8.2 | +12.2 | | | |
| Silk goods | +5.1 | +3.1 | **Metal products, other than iron and steel** | +4.3 | +5.7 |
| Woolen and worsted goods | +3.9 | +6.5 | Stamped and enameled ware | +2.0 | +2.9 |
| Carpets and rugs | +9.1 | +9.9 | Brass, bronze, and copper products | +5.7 | +7.1 |
| Dyeing and finishing textiles | +2.6 | +3.5 | | | |
| Clothing, men's | +2.5 | +2.7 | **Tobacco products** | −2.0 | +2.0 |
| Shirts and collars | +6.4 | +8.5 | Chewing and smoking tobacco and snuff | −8.1 | −4.6 |
| Clothing, women's | −1.3 | +0.8 | Cigars and cigarettes | −1.2 | +2.8 |
| Millinery and lace goods | +3.1 | −1.0 | | | |
| | | | **Vehicles for land transportation** | +0.6 | +7.2 |
| **Iron and steel and their products** | +9.0 | +12.6 | Automobiles | −2.6 | −0.2 |
| Iron and steel | +7.5 | +12.1 | Carriages and wagons | +6.2 | +8.0 |
| Cast-iron pipe | +1.2 | +12.6 | Car building and repairing, electric-railroad | −0.4 | −0.6 |
| Structural ironwork | +7.2 | +7.8 | Car building and repairing, steam-railroad | +2.9 | +13.1 |
| Foundry and machine-shop products | +13.0 | +16.5 | | | |
| Hardware | +1.5 | +6.2 | **Miscellaneous industries** | +27.4 | +26.8 |
| Machine tools | +37.5 | +36.5 | Agricultural implements | +11.4 | +8.5 |
| Steam fittings and steam and hot-water heating apparatus | −11.8 | −13.2 | Electrical machinery, apparatus, and supplies | +34.4 | +31.3 |
| Stoves | +3.3 | +5.8 | Pianos and organs | −23.5 | −26.3 |
| | | | Rubber boots and shoes | +6.8 | +13.5 |
| **Lumber and its products** | +3.0 | +3.3 | Automobile tires | −2.0 | −9.7 |
| Lumber, sawmills | +1.9 | +1.1 | Shipbuilding | +34.3 | +36.8 |
| Lumber, millwork | −2.2 | −1.1 | | | |
| Furniture | +8.5 | +10.7 | **All industries** | +5.3 | +8.4 |
| | | | | | |
| **Leather and its products** | +2.3 | +5.0 | | | |
| Leather | −1.4 | +5.2 | | | |
| Boots and shoes | +3.2 | +4.5 | | | |
| | | | | | |
| **Paper and printing** | +3.0 | +5.1 | | | |
| Paper and pulp | +1.7 | +5.0 | | | |
| Paper boxes | +4.9 | +5.4 | | | |
| Printing, book and job | +3.9 | +3.5 | | | |
| Printing, newspapers | +3.5 | +6.3 | | | |

## RECAPITULATION BY GEOGRAPHIC DIVISIONS

| GEOGRAPHIC DIVISION [1] | | | GEOGRAPHIC DIVISION—contd. | | |
|---|---|---|---|---|---|
| New England | +5.6 | +9.4 | West South Central | +7.1 | +10.1 |
| Middle Atlantic | +9.2 | +11.5 | Mountain | +6.2 | +5.7 |
| East North Central | +4.8 | +5.2 | Pacific | +2.5 | +1.2 |
| West North Central | +4.3 | +6.3 | | | |
| South Atlantic | +3.2 | +6.2 | **All divisions** | +5.3 | +8.4 |
| East South Central | +3.8 | +6.0 | | | |

[1] See footnotes 3 to 11, p. 192.

## Per Capita Earnings in Manufacturing Industries in August, 1929

PER CAPITA EARNINGS of employees in the combined 54 manufacturing industries were 3.5 per cent greater in August, 1929, than in July, 1929, and 2.9 per cent greater than in August, 1928.

TABLE 4.—COMPARISON OF PER CAPITA EARNINGS, IN **MANUFACTURING** INDUSTRIES, AUGUST, 1929, WITH JULY, 1929, AND AUGUST, 1928

| Industry | Per cent of change August, 1929, compared with— | | Industry | Per cent of change August, 1929, compared with— | |
|---|---|---|---|---|---|
| | July, 1929 | August, 1928 | | July, 1929 | August, 1928 |
| Automobiles | +19.0 | +2.5 | Brass, bronze, and copper products | +1.7 | +1.8 |
| Clothing, women's | +15.3 | +2.0 | Woolen and worsted goods | +1.1 | +2.2 |
| Pottery | +8.5 | −0.7 | Printing, book and job | +0.6 | −0.3 |
| Millinery and lace goods | +6.7 | −3.9 | Chewing and smoking tobacco and snuff | +0.4 | +3.8 |
| Furniture | +6.1 | +1.8 | Car building and repairing, electric-railroad | +0.3 | −0.4 |
| Confectionery | +4.9 | +2.8 | Cast-iron pipe | +0.3 | +11.3 |
| Glass | +4.9 | +0.8 | Cigars and cigarettes | +0.3 | +4.3 |
| Iron and steel | +4.9 | +4.4 | Pianos and organs | +0.3 | −3.9 |
| Stamped and enameled ware | +4.5 | +1.0 | Printing, newspapers | +0.3 | +2.8 |
| Car building and repairing, steam-railroad | +4.4 | +9.5 | Stoves | +0.2 | +2.6 |
| Sugar refining, cane | +4.1 | +1.2 | Baking | −0.1 | +0.8 |
| Hardware | +4.0 | +4.6 | Petroleum refining | −0.1 | −1.8 |
| Boots and shoes | +3.8 | +1.0 | Chemicals | −0.2 | −0.7 |
| Cement | +3.5 | +0.1 | Paper boxes | −0.3 | +0.4 |
| Carpets and rugs | +3.4 | +0.8 | Machine tools | −0.6 | −1.1 |
| Flour | +3.4 | +2.2 | Cotton goods | −0.8 | +3.4 |
| Hosiery and knit goods | +3.4 | +3.5 | Shirts and collars | −0.8 | +2.1 |
| Lumber, millwork | +3.3 | +1.0 | Automobile tires | −1.0 | −8.2 |
| Structural ironwork | +3.3 | +0.3 | Electrical machinery, apparatus, and supplies | −1.0 | −2.2 |
| Agricultural implements | +3.2 | −3.0 | Rubber boots and shoes | −1.1 | +6.0 |
| Clothing, men's | +3.0 | +0.1 | Lumber, sawmills | −1.9 | −0.8 |
| Dyeing and finishing textiles | +3.0 | +0.7 | Ice cream | −2.1 | −1.5 |
| Leather | +2.9 | +6.4 | Shipbuilding | −2.6 | +1.7 |
| Paper and pulp | +2.5 | +3.2 | Slaughtering and meat packing | −2.9 | +1.9 |
| Carriages and wagons | +2.3 | +1.8 | Fertilizers | −6.8 | −3.2 |
| Foundry and machine-shop products | +2.3 | +2.9 | **All industries** | +3.5 | +2.9 |
| Steam fittings and steam and hot-water heating apparatus | +2.3 | −2.0 | | | |
| Brick, tile, and terra cotta | +2.0 | −3.2 | | | |
| Silk goods | +2.0 | −1.6 | | | |

## Wage Changes in Manufacturing Industries

FORTY-SEVEN ESTABLISHMENTS in 13 manufacturing industries reported wage-rate increases in the month ending August 15, 1929. These increases averaged 2.8 per cent and affected 16,795 employees, or 35 per cent of all employees in the establishments concerned.

Eight establishments in 7 industries reported wage-rate decreases during the same period. These decreases averaged 10 per cent and affected 1,133 employees, or 98 per cent of all employees in the establishments concerned.

TABLE 5.—WAGE ADJUSTMENTS OCCURRING BETWEEN JULY 15 AND AUGUST 15, 1929

| Industry | Establishments | | Per cent of increase or decrease in wage rate | | Employees affected | | |
|---|---|---|---|---|---|---|---|
| | Total number reporting | Number reporting increase or decrease in wage rates | Range | Average | Total number | Per cent of employees | |
| | | | | | | In establishments reporting increase or decrease in wage rates | In all establishments reporting |
| | | | Increases | | | | |
| Flour | 339 | 1 | 5.9 | 5.9 | 23 | 72 | (1) |
| Baking | 667 | 3 | 1.0- 6.9 | 5.3 | 72 | 11 | (1) |
| Iron and steel | 200 | 2 | 1.5- 6.0 | 1.6 | 2,539 | 53 | 1 |
| Foundry and machine-shop products | 1,051 | 14 | 1.0-15.0 | 7.4 | 288 | 12 | (1) |
| Machine tools | 151 | 3 | 4.0- 9.4 | 7.5 | 31 | 8 | (1) |
| Boots and shoes | 311 | 1 | 10.0 | 10.0 | 239 | 100 | (1) |
| Paper and pulp | 211 | 2 | 10.0 | 10.0 | 31 | 8 | (1) |
| Printing, book and job | 379 | 4 | 9.2-12.5 | 11.0 | 47 | 11 | (1) |
| Printing, newspapers | 450 | 3 | 3.3-22.0 | 14.0 | 129 | 34 | (1) |
| Glass | 137 | 1 | 8.0 | 8.0 | 65 | 8 | (1) |
| Car building and repairing, electric-railroad | 440 | 2 | 2.9 | 2.9 | 109 | 98 | (1) |
| Car building and repairing, steam-railroad | 554 | 8 | 4.7-14.0 | 8.1 | 531 | 53 | (1) |
| Electrical machinery, apparatus, and supplies | 186 | 3 | 2.3-10.0 | 2.3 | 12,691 | 36 | 6 |
| | | | Decreases | | | | |
| Slaughtering and meat packing | 205 | 1 | 12.0 | 12.0 | 75 | 88 | (1) |
| Hosiery and knit goods | 328 | 1 | 10.0 | 10.0 | 45 | 100 | (1) |
| Clothing, men's | 309 | 1 | 10.0 | 10.0 | 75 | 80 | (1) |
| Lumber, sawmills | 654 | 1 | 10.0 | 10.0 | 750 | 100 | 1 |
| Paper and pulp | 211 | 1 | 5.0 | 5.0 | 36 | 100 | (1) |
| Fertilizers | 167 | 1 | 10.0 | 10.0 | 17 | 100 | (1) |
| Brick, tile, and terra cotta | 640 | 2 | 10.0 | 10.0 | 135 | 100 | (1) |

[1] Less than one-half of 1 per cent.

## Indexes of Employment and Pay-Roll Totals in Manufacturing Industries

INDEX NUMBERS for August, 1928, and for June, July, and August, 1929, showing relatively the variation in number of persons employed and in pay-roll totals in each of the 54 manufacturing industries surveyed by the Bureau of Labor Statistics, together with general indexes for the combined 12 groups of industries, appear in Table 6.

TABLE 6.—INDEXES OF EMPLOYMENT AND PAY-ROLL TOTALS IN MANUFACTURING INDUSTRIES, AUGUST, 1928, AND JUNE, JULY, AND AUGUST, 1929

[Monthly average, 1926=100]

| Industry | Employment | | | | Pay-roll totals | | | |
|---|---|---|---|---|---|---|---|---|
| | 1928 | 1929 | | | 1928 | 1929 | | |
| | August | June | July | August | August | June | July | August |
| **General index** | **93.6** | **98.8** | **98.2** | **98.6** | **94.2** | **102.8** | **98.2** | **102.1** |
| **Food and kindred products** | **96.9** | **98.9** | **99.5** | **99.4** | **98.3** | **102.7** | **102.8** | **102.2** |
| Slaughtering and meat packing | 97.2 | 100.1 | 100.9 | 99.9 | 96.8 | 103.2 | 105.2 | 101.1 |
| Confectionery | 83.3 | 83.0 | 81.2 | 85.7 | 84.0 | 86.8 | 80.1 | 88.6 |
| Ice cream | 110.7 | 106.3 | 110.4 | 108.0 | 111.9 | 107.3 | 112.0 | 107.4 |
| Flour | 101.3 | 97.0 | 103.0 | 104.9 | 104.2 | 101.0 | 104.9 | 110.5 |
| Baking | 100.0 | 103.8 | 103.7 | 102.3 | 100.7 | 105.9 | 105.3 | 103.9 |
| Sugar refining, cane | 95.8 | 97.5 | 96.4 | 99.2 | 100.0 | 103.6 | 97.8 | 104.8 |
| **Textiles and their products** | **91.9** | **97.3** | **94.3** | **95.1** | **90.3** | **97.3** | **91.1** | **95.0** |
| Cotton goods | 88.6 | 96.8 | 93.5 | 91.6 | 82.7 | 95.2 | 90.9 | 88.4 |
| Hosiery and knit goods | 89.8 | 97.7 | 96.5 | 97.2 | 90.0 | 104.6 | 97.0 | 101.0 |
| Silk goods | 93.5 | 97.9 | 97.8 | 98.3 | 98.3 | 102.9 | 98.8 | 101.3 |
| Woolen and worsted goods | 93.2 | 96.1 | 93.9 | 96.8 | 91.0 | 97.0 | 93.0 | 96.9 |
| Carpets and rugs | 96.2 | 106.1 | 102.5 | 105.0 | 89.6 | 99.8 | 93.0 | 98.5 |
| Dyeing and finishing textiles | 95.5 | 101.6 | 99.4 | 98.0 | 94.1 | 100.8 | 96.1 | 97.4 |
| Clothing, men's | 93.4 | 93.7 | 93.6 | 95.7 | 92.6 | 92.9 | 90.3 | 95.1 |
| Shirts and collars | 85.6 | 91.1 | 89.0 | 91.1 | 82.6 | 86.7 | 88.4 | 89.6 |
| Clothing, women's | 98.5 | 104.2 | 93.7 | 97.2 | 96.8 | 97.5 | 81.5 | 97.6 |
| Millinery and lace goods | 87.7 | 91.9 | 84.0 | 90.4 | 88.3 | 91.9 | 76.1 | 87.4 |
| **Iron and steel and their products** | **92.1** | **101.7** | **101.1** | **100.4** | **92.8** | **106.8** | **101.9** | **104.5** |
| Iron and steel | 90.7 | 97.2 | 96.6 | 97.5 | 92.2 | 104.0 | 97.6 | 103.4 |
| Cast-iron pipe | 80.7 | 78.6 | 80.4 | 81.7 | 74.0 | 78.3 | 81.8 | 83.3 |
| Structural ironwork | 99.6 | 102.3 | 104.3 | 106.8 | 102.5 | 104.7 | 104.3 | 110.5 |
| Foundry and machine-shop products | 93.2 | 108.6 | 108.4 | 105.3 | 93.6 | 113.5 | 109.7 | 109.0 |
| Hardware | 88.1 | 92.8 | 91.6 | 89.4 | 85.6 | 95.9 | 89.6 | 90.9 |
| Machine tools | 95.4 | 132.3 | 133.2 | 131.2 | 100.8 | 144.1 | 140.4 | 137.6 |
| Steam fittings and steam and hot-water heating apparatus | 86.8 | 76.6 | 72.8 | 76.6 | 87.8 | 76.4 | 70.8 | 76.2 |
| Stoves | 88.6 | 92.2 | 85.7 | 91.5 | 81.1 | 89.0 | 80.3 | 85.8 |
| **Lumber and its products** | **89.3** | **89.8** | **90.3** | **92.0** | **90.1** | **90.7** | **90.3** | **93.1** |
| Lumber, sawmills | 89.1 | 89.6 | 89.5 | 90.8 | 90.2 | 90.6 | 91.7 | 91.2 |
| Lumber, millwork | 88.9 | 87.4 | 87.2 | 86.9 | 89.2 | 87.9 | 85.7 | 88.2 |
| Furniture | 90.5 | 92.0 | 94.3 | 98.2 | 90.4 | 92.9 | 90.6 | 100.1 |
| **Leather and its products** | **94.9** | **88.5** | **93.6** | **97.1** | **96.5** | **86.8** | **94.4** | **101.3** |
| Leather | 95.5 | 90.0 | 93.0 | 94.2 | 92.8 | 92.2 | 93.6 | 97.6 |
| Boots and shoes | 94.8 | 88.1 | 93.8 | 97.8 | 98.0 | 85.2 | 94.6 | 102.4 |
| **Paper and printing** | **98.2** | **100.2** | **100.6** | **101.1** | **99.3** | **105.2** | **103.1** | **104.4** |
| Paper and pulp | 94.4 | 95.7 | 95.4 | 96.0 | 94.0 | 97.7 | 95.7 | 98.7 |
| Paper boxes | 90.7 | 93.2 | 94.2 | 95.1 | 95.5 | 99.7 | 100.0 | 100.7 |
| Printing, book and job | 99.2 | 100.9 | 102.8 | 103.1 | 100.1 | 104.8 | 102.6 | 103.6 |
| Printing, newspapers | 103.5 | 107.7 | 106.9 | 107.1 | 103.9 | 112.6 | 109.8 | 110.4 |
| **Chemicals and allied products** | **88.3** | **94.4** | **95.8** | **98.1** | **92.8** | **99.9** | **100.4** | **102.0** |
| Chemicals | 96.0 | 101.3 | 100.4 | 102.2 | 99.5 | 105.8 | 103.4 | 105.2 |
| Fertilizers | 71.3 | 63.6 | 67.4 | 73.8 | 78.5 | 73.6 | 76.7 | 78.2 |
| Petroleum refining | 86.0 | 96.4 | 99.4 | 101.0 | 89.6 | 98.9 | 101.6 | 103.1 |
| **Stone, clay, and glass products** | **93.7** | **90.7** | **88.1** | **90.6** | **93.7** | **90.8** | **83.5** | **89.4** |
| Cement | 94.0 | 85.5 | 86.0 | 85.8 | 96.3 | 87.6 | 85.0 | 87.8 |
| Brick, tile, and terra cotta | 91.1 | 87.6 | 88.6 | 88.6 | 89.8 | 86.2 | 82.9 | 84.6 |
| Pottery | 94.7 | 93.8 | 87.1 | 91.9 | 91.8 | 90.5 | 77.4 | 88.6 |
| Glass | 95.8 | 96.4 | 88.9 | 95.6 | 96.9 | 99.5 | 86.8 | 97.9 |
| **Metal products, other than iron and steel** | **93.1** | **98.9** | **97.4** | **97.1** | **96.6** | **104.6** | **100.1** | **102.1** |
| Stamped and enameled ware | 88.6 | 91.1 | 90.4 | 90.4 | 90.3 | 93.4 | 88.9 | 92.9 |
| Brass, bronze, and copper products | 94.9 | 102.6 | 100.8 | 100.3 | 98.8 | 109.1 | 104.6 | 105.8 |
| **Tobacco products** | **96.8** | **93.5** | **92.5** | **94.9** | **93.8** | **93.6** | **92.9** | **95.7** |
| Chewing and smoking tobacco and snuff | 91.8 | 87.1 | 83.0 | 84.4 | 91.8 | 91.4 | 85.8 | 87.6 |
| Cigars and cigarettes | 97.5 | 94.3 | 93.7 | 96.3 | 94.1 | 93.9 | 93.8 | 96.7 |

TABLE 6.—INDEXES OF EMPLOYMENT AND PAY-ROLL TOTALS IN MANUFACTURING INDUSTRIES, AUGUST, 1928, AND JUNE, JULY, AND AUGUST, 1929—Continued

| Industry | Employment | | | | Pay-roll totals | | | |
|---|---|---|---|---|---|---|---|---|
| | 1928 | 1929 | | | 1928 | 1929 | | |
| | August | June | July | August | August | June | July | August |
| **Vehicles for land transportation** | **100.2** | **103.1** | **101.7** | **100.8** | **101.8** | **109.8** | **98.4** | **109.1** |
| Automobiles | 120.8 | 123.4 | 120.5 | 117.6 | 124.8 | 127.4 | 107.2 | 124.6 |
| Carriages and wagons | 82.8 | 79.4 | 81.0 | 87.9 | 87.5 | 83.1 | 85.1 | 94.5 |
| Car building and repairing, electric-railroad | 93.3 | 90.6 | 92.8 | 92.9 | 94.5 | 93.8 | 93.6 | 93.9 |
| Car building and repairing, steam-railroad | 83.9 | 85.9 | 85.7 | 86.3 | 83.4 | 93.0 | 89.7 | 94.3 |
| **Miscellaneous industries** | **90.4** | **115.3** | **116.3** | **115.2** | **89.4** | **118.5** | **115.7** | **113.4** |
| Agricultural implements | 104.3 | 126.9 | 122.2 | 116.2 | 110.3 | 131.3 | 121.9 | 119.7 |
| Electrical machinery, apparatus, and supplies | 94.4 | 123.1 | 126.2 | 126.9 | 96.2 | 127.7 | 127.0 | 126.3 |
| Pianos and organs | 75.7 | 64.6 | 61.6 | 57.9 | 72.0 | 61.8 | 56.3 | 53.1 |
| Rubber boots and shoes | 93.8 | 93.2 | 96.5 | 100.2 | 90.4 | 97.8 | 99.8 | 102.6 |
| Automobile tires | 109.4 | 113.9 | 111.8 | 107.2 | 111.8 | 113.1 | 106.3 | 100.9 |
| Shipbuilding | 78.2 | 107.4 | 107.5 | 105.0 | 76.4 | 113.2 | 109.8 | 104.5 |

Table 7 shows the general index of employment in manufacturing industries and the general index of pay-roll totals, by months, from January, 1923, to August, 1929.

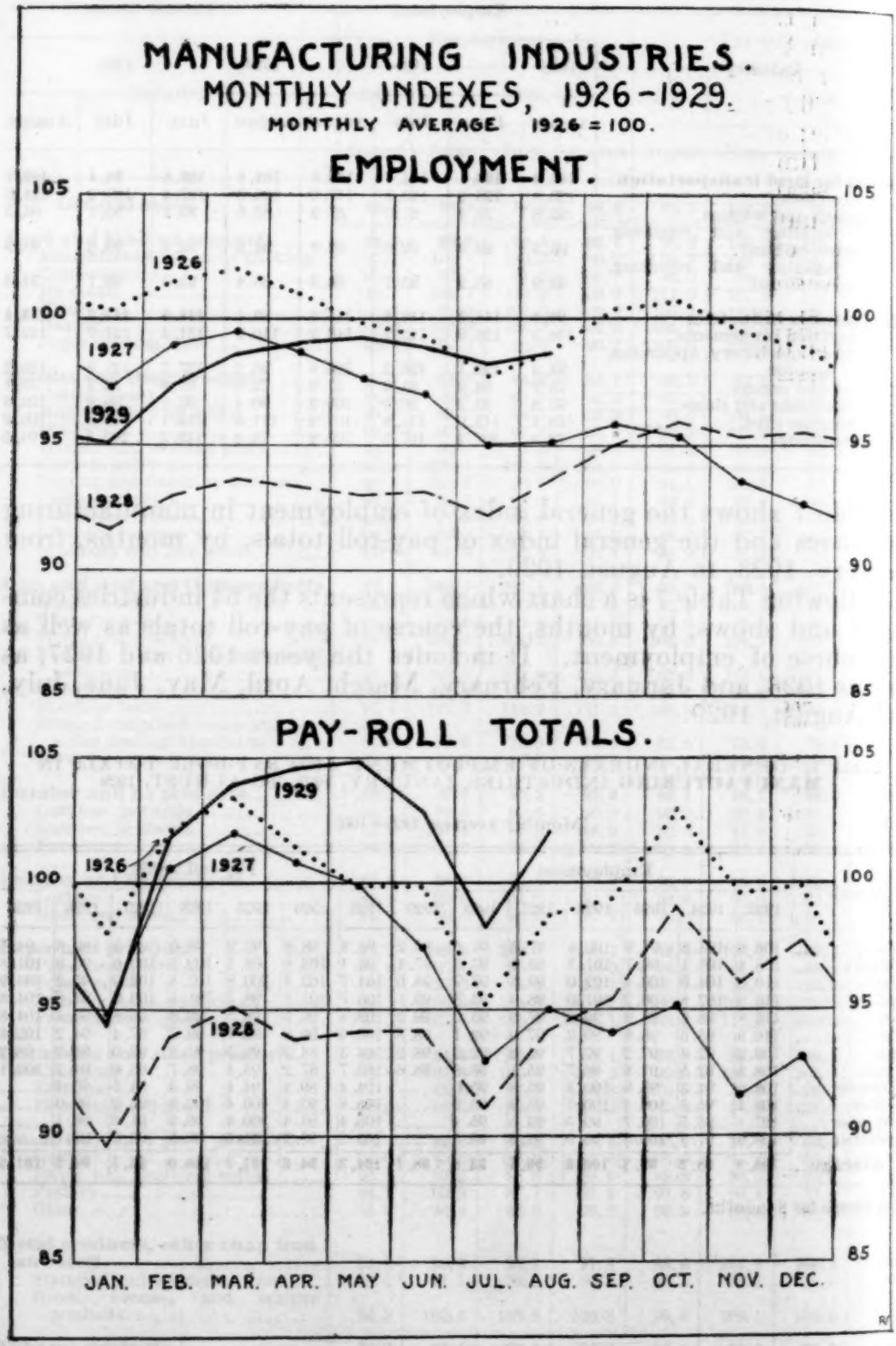
Following Table 7 is a chart which represents the 54 industries combined and shows, by months, the course of pay-roll totals as well as the course of employment. It includes the years 1926 and 1927, as well as 1928, and January, February, March, April, May, June, July, and August, 1929.

TABLE 7.—GENERAL INDEXES OF EMPLOYMENT AND PAY-ROLL TOTALS IN MANUFACTURING INDUSTRIES, JANUARY, 1923, TO AUGUST, 1929

[Monthly average, 1926=100]

| Month | Employment | | | | | | | Pay-roll totals | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1923 | 1924 | 1925 | 1926 | 1927 | 1928 | 1929 | 1923 | 1924 | 1925 | 1926 | 1927 | 1928 | 1929 |
| January | 106.6 | 103.8 | 97.9 | 100.4 | 97.3 | 91.6 | 95.2 | 95.8 | 98.6 | 93.9 | 98.0 | 94.9 | 89.6 | 94.5 |
| February | 108.4 | 105.1 | 99.7 | 101.5 | 99.0 | 93.0 | 97.4 | 99.4 | 103.8 | 99.3 | 102.2 | 100.6 | 93.9 | 101.8 |
| March | 110.8 | 104.9 | 100.4 | 102.0 | 99.5 | 93.7 | 98.6 | 104.7 | 103.3 | 100.8 | 103.4 | 102.0 | 95.2 | 103.9 |
| April | 110.8 | 102.8 | 100.2 | 101.0 | 98.6 | 93.3 | 99.1 | 105.7 | 101.1 | 98.3 | 101.5 | 100.8 | 93.8 | 104.6 |
| May | 110.8 | 98.8 | 98.9 | 99.8 | 97.6 | 93.0 | 99.2 | 109.4 | 96.5 | 98.5 | 99.8 | 99.8 | 94.1 | 104.8 |
| June | 110.9 | 95.6 | 98.0 | 99.3 | 97.0 | 93.1 | 98.8 | 109.3 | 90.8 | 95.7 | 99.7 | 97.4 | 94.2 | 102.8 |
| July | 109.2 | 92.3 | 97.2 | 97.7 | 95.0 | 92.2 | 98.2 | 104.3 | 84.3 | 93.5 | 95.2 | 93.0 | 91.2 | 98.2 |
| August | 108.5 | 92.5 | 97.8 | 98.7 | 95.1 | 93.6 | 98.6 | 103.7 | 87.2 | 95.4 | 98.7 | 95.0 | 94.2 | 102.1 |
| September | 108.6 | 94.3 | 98.9 | 100.3 | 95.8 | 95.0 | ------ | 104.4 | 89.8 | 94.4 | 99.3 | 94.1 | 95.4 | ------ |
| October | 108.1 | 95.6 | 100.4 | 100.7 | 95.3 | 95.9 | ------ | 106.8 | 92.4 | 100.4 | 102.9 | 95.2 | 99.0 | ------ |
| November | 107.4 | 95.5 | 100.7 | 99.5 | 93.5 | 95.4 | ------ | 105.4 | 91.4 | 100.4 | 99.6 | 91.6 | 96.1 | ------ |
| December | 105.4 | 97.3 | 100.8 | 98.9 | 92.6 | 95.5 | ------ | 103.2 | 95.7 | 101.6 | 99.8 | 93.2 | 97.7 | ------ |
| **Average** | **108.8** | **98.2** | **99.2** | **100.0** | **96.4** | **93.8** | [1] **98.1** | **104.3** | **94.6** | **97.7** | **100.0** | **96.5** | **94.5** | [1] **101.6** |

[1] Average for 8 months.


MANUFACTURING INDUSTRIES.
MONTHLY INDEXES, 1926-1929.
MONTHLY AVERAGE 1926 = 100.
EMPLOYMENT.
105
100
95
90
85
1926
1927
1929
1928
PAY-ROLL TOTALS.
JAN. FEB. MAR. APR. MAY JUN. JUL. AUG. SEP. OCT. NOV. DEC.

## Force Employed in Manufacturing Industries in August, 1929, and Time Worked by Employees

NINE THOUSAND EIGHT HUNDRED AND SEVENTY-TWO establishments in the 54 manufacturing industries reported as to force employed in August, 1929, and as to working time of employees. Thirty-nine per cent of the establishments had a full normal force of employees, 60 per cent were working with reduced forces, and 1 per cent were idle; employees in 83 per cent of the establishments were working full time, and employees in 17 per cent were working part time.

The establishments in operation had an average of 93 per cent of a full normal force of employees who were working an average of 98 per cent of full time, each of these percentages being 1 per cent higher than those shown in the report for July.

TABLE 8.—PROPORTION OF FULL NORMAL FORCE EMPLOYED IN MANUFACTURING INDUSTRIES IN AUGUST, 1929, AND PROPORTION OF FULL TIME WORKED BY EMPLOYEES

| Industry | Establishments reporting | | Operating establishments only | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | Per cent of establishments in which employees worked— | | Average per cent of full time worked by employees in establishments operating | Per cent of establishments operating with— | | Average per cent of full normal force employed in establishments operating |
| | Total number | Per cent idle | Full time | Part time | | Full normal force | Part normal force | |
| **Food and kindred products** | **1,445** | (1) | **86** | **14** | **98** | **41** | **59** | **89** |
| Slaughtering and meat packing | 153 | ------ | 89 | 11 | 99 | 48 | 52 | 90 |
| Confectionery | 240 | ------ | 68 | 33 | 95 | 12 | 88 | 70 |
| Ice cream | 217 | ------ | 86 | 14 | 98 | 37 | 63 | 91 |
| Flour | 278 | (1) | 84 | 15 | 98 | 49 | 51 | 95 |
| Baking | 544 | ------ | 95 | 5 | 99 | 50 | 50 | 96 |
| Sugar refining, cane | 13 | ------ | 85 | 15 | 98 | 15 | 85 | 90 |
| **Textiles and their products** | **1,718** | **1** | **81** | **18** | **97** | **37** | **61** | **88** |
| Cotton goods | 426 | 2 | 74 | 24 | 95 | 30 | 68 | 84 |
| Hosiery and knit goods | 266 | 1 | 86 | 13 | 97 | 42 | 57 | 95 |
| Silk goods | 262 | (1) | 89 | 11 | 98 | 40 | 59 | 93 |
| Woolen and worsted goods | 159 | 2 | 72 | 26 | 95 | 33 | 65 | 84 |
| Carpets and rugs | 22 | ------ | 59 | 41 | 94 | 55 | 45 | 106 |
| Dyeing and finishing | 101 | ------ | 80 | 20 | 96 | 31 | 69 | 89 |
| Clothing, men's | 201 | (1) | 86 | 13 | 99 | 45 | 54 | 89 |
| Shirts and collars | 87 | 5 | 84 | 11 | 98 | 47 | 48 | 91 |
| Clothing, women's | 130 | 2 | 76 | 22 | 97 | 42 | 55 | 90 |
| Millinery and lace goods | 64 | ------ | 91 | 9 | 99 | 25 | 75 | 85 |
| **Iron and steel and their products** | **1,600** | (1) | **77** | **22** | **97** | **44** | **56** | **93** |
| Iron and steel | 151 | 1 | 81 | 19 | 97 | 44 | 56 | 93 |
| Cast-iron pipe | 30 | ------ | 33 | 67 | 81 | 7 | 93 | 77 |
| Structural ironwork | 139 | ------ | 89 | 11 | 99 | 53 | 47 | 100 |
| Foundry and machine-shop products | 895 | (1) | 77 | 23 | 97 | 43 | 57 | 93 |
| Hardware | 55 | 2 | 69 | 29 | 95 | 27 | 71 | 85 |
| Machine tools | 134 | ------ | 93 | 7 | 101 | 70 | 30 | 121 |
| Steam fittings and steam and hot-water heating apparatus | 98 | 2 | 63 | 35 | 95 | 26 | 72 | 80 |
| Stoves | 98 | 2 | 62 | 36 | 93 | 40 | 58 | 94 |
| **Lumber and its products** | **1,116** | **1** | **81** | **18** | **98** | **35** | **64** | **88** |
| Lumber, sawmills | 519 | 1 | 81 | 18 | 98 | 39 | 61 | 88 |
| Lumber, millwork | 259 | ------ | 80 | 20 | 98 | 23 | 77 | 80 |
| Furniture | 338 | 1 | 82 | 17 | 99 | 38 | 61 | 95 |
| **Leather and its products** | **368** | **1** | **89** | **10** | **99** | **51** | **48** | **97** |
| Leather | 104 | ------ | 90 | 10 | 99 | 41 | 59 | 93 |
| Boots and shoes | 264 | 1 | 88 | 11 | 99 | 55 | 44 | 98 |
| **Paper and printing** | **816** | (1) | **88** | **12** | **99** | **48** | **52** | **99** |
| Paper and pulp | 152 | ------ | 85 | 15 | 99 | 41 | 59 | 96 |
| Paper boxes | 144 | ------ | 76 | 24 | 97 | 33 | 67 | 88 |
| Printing, book and job | 260 | (1) | 90 | 10 | 99 | 43 | 57 | 106 |
| Printing, newspapers | 260 | ------ | 93 | 7 | 100 | 65 | 35 | 101 |

[1] Less than one-half of 1 per cent.

TABLE 8.—PROPORTION OF FULL NORMAL FORCE EMPLOYED IN MANUFACTURING INDUSTRIES IN AUGUST, 1929, AND PROPORTION OF FULL TIME WORKED BY EMPLOYEES—Continued

| Industry | Establishments reporting | | Operating establishments only | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | Per cent of establishments in which employees worked— | | Average per cent of full time worked by employees in establishments operating | Per cent of establishments operating with— | | Average per cent of full normal force employed in establishments operating |
| | Total number | Per cent idle | Full time | Part time | | Full normal force | Part normal force | |
| **Chemicals and allied products** | **283** | (1) | **81** | **18** | **96** | **21** | **79** | **80** |
| Chemicals | 102 | 1 | 89 | 10 | 98 | 39 | 60 | 95 |
| Fertilizers | 142 | ------ | 70 | 30 | 94 | 6 | 94 | 46 |
| Petroleum refining | 39 | ------ | 100 | ------ | 100 | 26 | 74 | 84 |
| **Stone, clay, and glass products** | **812** | **3** | **85** | **11** | **98** | **34** | **63** | **86** |
| Cement | 85 | 1 | 98 | 1 | 101 | 34 | 65 | 79 |
| Brick, tile, and terra cotta | 532 | 4 | 84 | 11 | 98 | 32 | 63 | 86 |
| Pottery | 97 | 1 | 75 | 24 | 95 | 36 | 63 | 87 |
| Glass | 98 | 1 | 92 | 7 | 99 | 41 | 58 | 91 |
| **Metal products, other than iron and steel** | **162** | ------ | **83** | **17** | **98** | **37** | **63** | **91** |
| Stamped and enameled ware | 51 | ------ | 92 | 8 | 100 | 35 | 65 | 89 |
| Brass, bronze, and copper products | 111 | ------ | 79 | 21 | 97 | 38 | 62 | 91 |
| **Tobacco products** | **204** | (1) | **71** | **28** | **95** | **40** | **60** | **94** |
| Chewing and smoking tobacco and snuff | 23 | ------ | 78 | 22 | 96 | 48 | 52 | 79 |
| Cigars and cigarettes | 181 | 1 | 70 | 29 | 95 | 39 | 61 | 97 |
| **Vehicles for land transportation** | **986** | ------ | **85** | **15** | **99** | **33** | **67** | **99** |
| Automobiles | 177 | ------ | 90 | 10 | 99 | 43 | 57 | 110 |
| Carriages and wagons | 47 | ------ | 83 | 17 | 97 | 15 | 85 | 72 |
| Car building and repairing, electric-railroad | 308 | ------ | 83 | 17 | 100 | 44 | 56 | 91 |
| Car building and repairing, steam-railroad | 454 | ------ | 86 | 14 | 99 | 24 | 76 | 83 |
| **Miscellaneous industries** | **362** | (1) | **80** | **19** | **98** | **50** | **50** | **101** |
| Agricultural implements | 63 | ------ | 75 | 25 | 97 | 29 | 71 | 89 |
| Electrical machinery, apparatus, and supplies | 142 | 1 | 85 | 14 | 99 | 68 | 32 | 111 |
| Pianos and organs | 58 | ------ | 69 | 31 | 95 | 24 | 76 | 62 |
| Rubber boots and shoes | 8 | ------ | 88 | 13 | 99 | 63 | 38 | 92 |
| Automobile tires | 32 | ------ | 66 | 34 | 96 | 44 | 56 | 103 |
| Shipbuilding | 59 | ------ | 93 | 7 | 100 | 56 | 44 | 78 |
| **All industries** | **9,872** | **1** | **83** | **17** | **98** | **39** | **60** | **93** |

[1] Less than one-half of 1 per cent.

## 2. Employment in Coal Mining in August, 1929

FORECASTING the usual autumn demand for coal, employment in coal mining—anthracite and bituminous coal combined—increased 4.5 per cent in August and pay-roll totals increased 13 per cent. The 1,247 mines reported had in August 280,513 employees whose combined earnings in one week were $7,116,079.

### Anthracite

IN ANTHRACITE MINING in August, 1929, there was an increase of 9.5 per cent in employment and an increase of 21.2 per cent in pay-roll totals.

All anthracite mines reported are in Pennsylvania—the Middle Atlantic geographic division. The details for July and August are shown in Table 1.

TABLE 1.—COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS IN IDENTICAL ANTHRACITE MINES IN JULY AND AUGUST, 1929

| Geographic division [1] | Mines | Number on pay roll | | Per cent of change | Amount of pay roll (1 week) | | Per cent of change |
|---|---|---|---|---|---|---|---|
| | | July, 1929 | August, 1929 | | July, 1929 | August, 1929 | |
| **Middle Atlantic** [1] | **162** | **93,716** | **102,661** | **+9.5** | **$2,278,454** | **$2,761,217** | **+21.2** |

[1] See footnote 4, p. 192.

### Bituminous Coal

EMPLOYMENT in bituminous coal mines was 1.7 per cent greater in August, 1929, than in July, and pay-roll totals were 8.4 per cent higher.

These figures are based upon reports from 1,085 mines in which in August there were 177,852 employees whose combined earnings in one week were $4,354,862.

The principal gains in employment were 7.6 per cent, 9.3 per cent, and 9.9 per cent in the East North Central, West North Central, and West South Central divisions, respectively. Small increases were reported in 3 other divisions, and small decreases in employment were reported in the Middle Atlantic and Pacific divisions.

Details for each geographic division, except the New England division for which no coal mining is reported, are shown in Table 2.

TABLE 2.—COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS IN IDENTICAL BITUMINOUS COAL MINES IN JULY AND AUGUST, 1929

| Geographic division [1] | Mines | Number on pay roll | | Per cent of change | Amount of pay roll (1 week) | | Per cent of change |
|---|---|---|---|---|---|---|---|
| | | July, 1929 | August, 1929 | | July, 1929 | August, 1929 | |
| Middle Atlantic | 339 | 56,813 | 56,479 | −0.6 | $1,356,017 | $1,440,410 | +6.2 |
| East North Central | 163 | 27,172 | 29,232 | +7.6 | 608,027 | 730,424 | +20.1 |
| West North Central | 45 | 3,643 | 3,982 | +9.3 | 75,833 | 88,892 | +17.2 |
| South Atlantic | 237 | 38,487 | 38,553 | +0.2 | 897,889 | 946,595 | +5.4 |
| East South Central | 194 | 37,978 | 38,587 | +1.6 | 781,345 | 823,664 | +5.4 |
| West South Central | 26 | 1,377 | 1,513 | +9.9 | 25,710 | 31,479 | +22.4 |
| Mountain | 71 | 7,998 | 8,179 | +2.3 | 232,796 | 252,951 | +8.7 |
| Pacific | 10 | 1,347 | 1,327 | −1.5 | 39,714 | 40,447 | +1.8 |
| **All divisions** | **1,085** | **174,815** | **177,852** | **+1.7** | **4,017,331** | **4,354,862** | **+8.4** |

[1] See footnotes 3 to 11, p. 192.

## 3. Employment in Metalliferous Mining in August, 1929

METALLIFEROUS mines, which in August, 1929, had nearly 60,000 employees and pay-roll totals in one week of $1,757,070, showed increased employment in August, as compared with July, of 1.7 per cent and increased pay-roll totals of 1.1 per cent.

Details for each geographic division from which metalliferous mining is reported are shown in the following table:

COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS IN IDENTICAL METALLIFEROUS MINES IN JULY AND AUGUST, 1929

| Geographic division [1] | Mines | Number on pay roll | | Per cent of change | Amount of pay roll (1 week) | | Per cent of change |
|---|---|---|---|---|---|---|---|
| | | July, 1929 | August, 1929 | | July, 1929 | August, 1929 | |
| Middle Atlantic | 5 | 833 | 856 | +2.8 | $22,990 | $25,772 | +12.1 |
| East North Central | 35 | 9,919 | 10,039 | +1.2 | 267,449 | 270,843 | +1.3 |
| West North Central | 54 | 8,529 | 8,614 | +1.0 | 252,107 | 255,095 | +1.2 |
| East South Central | 13 | 4,255 | 4,234 | −0.5 | 83,889 | 90,620 | +8.0 |
| West South Central | 63 | 4,192 | 4,630 | +10.4 | 108,996 | 118,876 | +9.1 |
| Mountain | 137 | 29,833 | 30,128 | +1.0 | 965,068 | 954,907 | −1.1 |
| Pacific | 14 | 1,215 | 1,296 | +6.7 | 37,753 | 40,957 | +8.5 |
| **All divisions** | **321** | **58,776** | **59,797** | **+1.7** | **1,738,252** | **1,757,070** | **+1.1** |

[1] See footnotes 3 to 11, p. 192.

## 4. Employment in Quarrying and Nonmetallic Mining in August, 1929

ESTABLISHMENTS in this industry in August regained the employees which were dropped in July, with a proportionate increase in pay-roll totals. The 666 establishments reporting in August had 38,847 employees whose combined earnings in one week were $1,057,819.

Details for each geographic division are shown in the following table:

COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS IN IDENTICAL QUARRIES AND NONMETALLIC MINES IN JULY AND AUGUST, 1929

| Geographic division [1] | Establishments | Number on pay roll | | Per cent of change | Amount of pay roll (1 week) | | Per cent of change |
|---|---|---|---|---|---|---|---|
| | | July, 1929 | August, 1929 | | July, 1929 | August, 1929 | |
| New England | 106 | 6,021 | 6,014 | −0.1 | $187,606 | $184,731 | −1.5 |
| Middle Atlantic | 92 | 6,511 | 6,627 | +1.8 | 199,030 | 208,722 | +4.9 |
| East North Central | 201 | 10,121 | 10,153 | +0.3 | 292,166 | 320,511 | +9.7 |
| West North Central | 62 | 2,634 | 2,840 | +7.8 | 68,892 | 72,407 | +5.1 |
| South Atlantic | 93 | 6,154 | 6,504 | +5.7 | 107,600 | 118,523 | +10.2 |
| East South Central | 49 | 2,813 | 2,732 | −2.9 | 44,742 | 44,512 | −0.5 |
| West South Central | 29 | 2,202 | 2,288 | +3.9 | 57,828 | 58,807 | +1.7 |
| Mountain | 11 | 281 | 256 | −8.9 | 6,732 | 5,902 | −12.3 |
| Pacific | 23 | 1,372 | 1,433 | +4.4 | 39,680 | 43,704 | +10.1 |
| **All divisions** | **666** | **38,109** | **38,847** | **+1.9** | **1,004,276** | **1,057,819** | **+5.3** |

[1] See footnotes 3 to 11, p. 192.

## 5. Employment in Public Utilities in August, 1929

THE number of employees reported by public utilities companies continued to increase in August, but a possible curtailment of outside working hours was shown by a very small decrease in pay-roll totals. Reports were received from 9,070 establishments having in August 724,605 employees whose combined earnings in one week were $21,122,013.

Each of the nine geographic divisions had a few more employees in August than in July while only three divisions reported increased pay-roll totals.

Details for each division are shown in the following table:

COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS IN IDENTICAL **PUBLIC UTILITIES** ESTABLISHMENTS IN JULY AND AUGUST, 1929

| Geographical division [1] | Establishments | Number on pay roll | | Per cent of change | Amount of pay roll (1 week) | | Per cent of change |
|---|---|---|---|---|---|---|---|
| | | July, 1929 | August, 1929 | | July, 1929 | August, 1929 | |
| New England | 360 | 40,878 | 41,066 | +0.5 | $1,343,516 | $1,336,534 | −0.5 |
| Middle Atlantic | 1,478 | 210,173 | 212,178 | +1.0 | 6,597,369 | 6,525,480 | −1.1 |
| East North Central | 1,605 | 188,286 | 191,109 | +1.5 | 5,798,236 | 5,800,874 | +(2) |
| West North Central | 1,465 | 75,574 | 76,727 | +1.5 | 2,032,226 | 2,035,901 | +0.2 |
| South Atlantic | 832 | 55,590 | 56,142 | +1.0 | 1,536,947 | 1,528,995 | −0.5 |
| East South Central | 656 | 21,001 | 21,435 | +2.1 | 500,500 | 492,021 | −1.7 |
| West South Central | 1,022 | 42,897 | 43,288 | +0.9 | 1,022,549 | 1,033,500 | +1.1 |
| Mountain | 568 | 17,736 | 17,862 | +0.7 | 472,214 | 463,801 | −1.8 |
| Pacific | 1,084 | 63,962 | 64,798 | +1.3 | 1,918,347 | 1,904,907 | −0.7 |
| **All divisions** | **9,070** | **716,097** | **724,605** | **+1.2** | **21,221,904** | **21,122,013** | **−0.5** |

[1] See footnotes 3 to 11, p. 192.

[2] Less than one-tenth of 1 per cent.

## 6. Employment in Wholesale and Retail Trade in August, 1929

EMPLOYMENT in 6,905 establishments—wholesale and retail trade combined—was practically unchanged in August, 1929, as compared with July, there having been an increase of 180 employees only out of a total of over 260,000; pay-roll totals, however, decreased 0.7 per cent.

### Wholesale Trade

EMPLOYMENT in wholesale trade alone increased 0.9 per cent in August as compared with July, while employees' earnings decreased 0.5 per cent, as shown by reports from 1,645 establishments having in August 60,329 employees whose combined earnings in one week were $1,817,464.

Details for each geographic division are shown in Table 1.

TABLE 1.—COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS IN IDENTICAL **WHOLESALE TRADE** ESTABLISHMENTS IN JULY AND AUGUST, 1929

| Geographic division [1] | Establishments | Number on pay roll | | Per cent of change | Amount of pay roll (1 week) | | Per cent of change |
|---|---|---|---|---|---|---|---|
| | | July, 1929 | August, 1929 | | July, 1929 | August, 1929 | |
| New England | 92 | 3,148 | 3,093 | −1.7 | $88,702 | $91,585 | +3.3 |
| Middle Atlantic | 303 | 8,985 | 9,062 | +0.9 | 281,545 | 284,069 | +0.9 |
| East North Central | 241 | 13,029 | 13,200 | +1.3 | 404,733 | 404,948 | +0.1 |
| West North Central | 181 | 11,926 | 12,123 | +1.7 | 353,457 | 343,090 | −2.9 |
| South Atlantic | 252 | 3,923 | 3,952 | +0.7 | 113,764 | 115,649 | +1.7 |
| East South Central | 59 | 1,907 | 1,949 | +2.2 | 54,166 | 53,383 | −1.4 |
| West South Central | 216 | 6,056 | 6,156 | +1.7 | 175,308 | 172,656 | −1.5 |
| Mountain | 59 | 1,745 | 1,758 | +0.7 | 57,492 | 59,499 | +3.5 |
| Pacific | 242 | 9,085 | 9,036 | −0.5 | 297,302 | 292,585 | −1.6 |
| **All divisions** | **1,645** | **59,804** | **60,329** | **+0.9** | **1,826,469** | **1,817,464** | **−0.5** |

[1] See footnotes 3 to 11, p. 192.

### Retail Trade

THE ONE DECREASE in employment in August, in any industrial group as a whole, appeared in retail trade—a decrease of 245 employees, or 0.1 per cent, out of a total of 200,000; pay-roll totals decreased 0.7 per cent.

Reports were received from 5,260 retail establishments having in August 199,996 employees, whose combined earnings in one week were $4,876,165.

Details by geographic divisions are shown in Table 2.

TABLE 2.—COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS IN IDENTICAL **RETAIL TRADE** ESTABLISHMENTS IN JULY AND AUGUST, 1929

| Geographic division [1] | Establishments | Number on pay roll | | Per cent of change | Amount of pay roll (1 week) | | Per cent of change |
|---|---|---|---|---|---|---|---|
| | | July, 1929 | August, 1929 | | July, 1929 | August, 1929 | |
| New England | 71 | 11,763 | 11,014 | −6.4 | $287,635 | $281,700 | −2.1 |
| Middle Atlantic | 313 | 32,176 | 30,956 | −3.8 | 830,552 | 807,282 | −2.8 |
| East North Central | 1,965 | 73,519 | 73,214 | −0.4 | 1,906,240 | 1,897,309 | −0.5 |
| West North Central | 660 | 16,664 | 16,530 | −0.8 | 363,340 | 360,816 | −0.7 |
| South Atlantic | 694 | 18,697 | 18,549 | −0.8 | 418,481 | 412,066 | −1.5 |
| East South Central | 337 | 5,218 | 4,808 | −7.9 | 103,135 | 98,588 | −4.4 |
| West South Central | 106 | 7,182 | 7,122 | −0.8 | 150,005 | 142,121 | −5.3 |
| Mountain | 67 | 1,997 | 2,005 | +0.4 | 39,214 | 39,016 | −0.5 |
| Pacific | 1,047 | 33,025 | 35,798 | +8.4 | 813,854 | 837,267 | +2.9 |
| **All divisions** | **5,260** | **200,241** | **199,996** | **−0.1** | **4,912,456** | **4,876,165** | **−0.7** |

[1] See footnotes 3 to 11, p. 192.

## 7. Employment in Hotels in August, 1929

EMPLOYMENT in hotels increased 1.5 per cent in August, 1929, as compared with July, but pay-roll totals fell off 0.4 per cent. The summer-resort hotels were responsible for the increase in employment, the increases being especially marked in the New England and Mountain divisions.

Per capita earnings, obtained by dividing the total number of employees into the total amount of pay roll, should not be interpreted as being the entire earnings of hotel employees. The pay-roll totals here reported are cash payments only, with no regard to the value of board or room furnished employees, and of course, no satisfactory estimate can be made of additional recompense in the way of tips. The additions to the money wages granted vary greatly, not only among localities but among hotels in one locality and among employees in one hotel. Some employees are furnished board and room, others are given board only for one, two, or three meals, while the division of tips is made in many ways.

Per capita earnings are further reduced by the considerable amount of part-time employment in hotels caused by conventions and banquets or other functions.

The details for each geographic division are shown in the table following:

COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS IN IDENTICAL **HOTELS** IN JULY AND AUGUST, 1929

| Geographic division [1] | Hotels | Number on pay roll | | Per cent of change | Amount of pay roll (1 week) | | Per cent of change |
|---|---|---|---|---|---|---|---|
| | | July, 1929 | August, 1929 | | July, 1929 | August, 1929 | |
| New England | 131 | 10,480 | 10,996 | +4.9 | $161,171 | $168,480 | +4.5 |
| Middle Atlantic | 311 | 43,893 | 44,612 | +1.6 | 772,829 | 774,205 | +0.2 |
| East North Central | 312 | 31,340 | 31,323 | −0.1 | 553,979 | 536,200 | −3.2 |
| West North Central | 189 | 12,875 | 12,866 | −0.1 | 184,811 | 178,868 | −3.2 |
| South Atlantic | 158 | 10,312 | 10,605 | +2.8 | 154,948 | 157,663 | +1.8 |
| East South Central | 59 | 5,248 | 5,194 | −1.0 | 65,310 | 64,630 | −1.0 |
| West South Central | 98 | 6,633 | 6,606 | −0.4 | 92,774 | 91,211 | −1.7 |
| Mountain | 97 | 4,853 | 5,349 | +10.2 | 78,922 | 88,684 | +12.4 |
| Pacific | 322 | 17,732 | 17,977 | +1.4 | 338,045 | 333,307 | −1.4 |
| **All divisions** | **1,677** | **143,366** | **145,528** | **+1.5** | **2,402,789** | **2,393,248** | **−0.4** |

[1] See footnotes 3 to 11, p. 192.

## 8. Employment in Canning and Preserving in August, 1929

EMPLOYMENT in canning and preserving was 45.7 per cent greater in August than in July and employees' earnings were 64.9 per cent greater, August being the second month of the summer canning season.

Probably no industrial group has wider variations in employment than this one, as will be shown from month to month in the several geographic divisions, each division containing classes of highly specialized products, many of which have seasons extending over 1, 2, or 3 months only.

Variations in increases in employment among the several districts in August ranged from 188 per cent in the East South Central States to 20.1 per cent in the East North Central States.

In addition to the establishments included in the following table, 42 establishments reported that their operations would not begin until September, or later. These plants not yet operating are scattered through every geographic division, although nearly one-half of them are in the South Atlantic States.

COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS IN IDENTICAL **CANNING AND PRESERVING** ESTABLISHMENTS IN JULY AND AUGUST, 1929

| Geographic division [1] | Establishments | Number on pay roll | | Per cent of change | Amount of pay roll (1 week) | | Per cent of change |
|---|---|---|---|---|---|---|---|
| | | July, 1929 | August, 1929 | | July, 1929 | August, 1929 | |
| New England | 40 | 2,669 | 3,795 | +42.2 | $32,636 | $55,707 | +70.7 |
| Middle Atlantic | 34 | 6,871 | 9,813 | +42.8 | 135,818 | 182,784 | +34.6 |
| East North Central | 113 | 7,387 | 8,875 | +20.1 | 106,657 | 123,220 | +15.5 |
| West North Central | 31 | 1,707 | 2,579 | +51.1 | 26,021 | 36,551 | +40.5 |
| South Atlantic | 35 | 2,236 | 2,750 | +23.0 | 27,391 | 25,530 | −6.8 |
| East South Central | 16 | 343 | 988 | +188.0 | 2,795 | 4,982 | +78.2 |
| West South Central | 9 | 221 | 462 | +109.0 | 1,349 | 2,058 | +52.6 |
| Mountain | 28 | 1,870 | 2,908 | +55.5 | 26,337 | 38,850 | +47.5 |
| Pacific | 126 | 20,054 | 31,004 | +54.6 | 320,146 | 650,176 | +103.1 |
| **All divisions** | **432** | **43,358** | **63,174** | **+45.7** | **679,150** | **1,119,858** | **+64.9** |

[1] See footnotes 3 to 11, p. 192.

## Employment on Steam Railroads in the United States

THE monthly trend of employment from January, 1923, to July, 1929, on Class I railroads—that is, all roads having operating revenues of $1,000,000 or over—is shown by the index numbers published in Table 1. These index numbers are constructed from monthly reports of the Interstate Commerce Commission, using the monthly average for 1926 as 100.

TABLE 1.—INDEX OF EMPLOYMENT ON **CLASS I STEAM RAILROADS** IN THE UNITED STATES, JANUARY, 1923, TO JULY, 1929

[Monthly average, 1926=100]

| Month | 1923 | 1924 | 1925 | 1926 | 1927 | 1928 | 1929 |
|---|---|---|---|---|---|---|---|
| January | 98.3 | 96.9 | 95.6 | 95.8 | 95.5 | 89.3 | 88.2 |
| February | 98.6 | 97.0 | 95.4 | 96.0 | 95.3 | 89.0 | 88.9 |
| March | 100.5 | 97.4 | 95.2 | 96.7 | 95.8 | 89.9 | 90.1 |
| April | 102.0 | 98.9 | 96.6 | 98.9 | 97.4 | 91.7 | 92.2 |
| May | 105.0 | 99.2 | 97.8 | 100.2 | 99.4 | 94.5 | 94.9 |
| June | 107.1 | 98.0 | 98.6 | 101.6 | 100.9 | 95.9 | 96.1 |
| July | 106.2 | 98.1 | 99.4 | 102.9 | 101.0 | 95.6 | 96.6 |
| August | 109.4 | 99.0 | 99.7 | 102.7 | 99.5 | 95.7 | ---- |
| September | 107.8 | 99.7 | 99.9 | 102.8 | 99.1 | 95.3 | ---- |
| October | 107.3 | 100.8 | 100.7 | 103.4 | 98.9 | 95.3 | ---- |
| November | 105.2 | 99.0 | 99.1 | 101.2 | 95.7 | 92.9 | ---- |
| December | 99.4 | 96.0 | 97.1 | 98.2 | 91.9 | 89.7 | ---- |
| Average | 104.1 | 98.3 | 97.9 | 100.0 | 97.5 | 92.9 | [1] 92.4 |

[1] Average for 7 months.

Table 2 shows the total number of employees on the 15th day each of July, 1928, and June and July, 1929, and pay-roll totals for the entire month of each month considered, by principal occupational groups and various important occupations.

In these tabulations the data for the occupational group reported as "executives, officials, and staff assistants" are omitted.

TABLE 2.—EMPLOYMENT AND EARNINGS OF RAILROAD EMPLOYEES, JULY, 1928, AND JUNE AND JULY, 1929

[From monthly reports of Interstate Commerce Commission. As data for only the more important occupations are shown separately, the group totals are not the sum of the items under the respective groups]

| Occupation | Number of employees at middle of month | | | Total earnings | | |
|---|---|---|---|---|---|---|
| | July, 1928 | June, 1929 | July, 1929 | July, 1928 | June, 1929 | July, 1929 |
| **Professional, clerical, and general** | **272,216** | **271,284** | **272,400** | **$39,224,523** | **$39,299,958** | **$40,165,266** |
| Clerks | 155,707 | 153,858 | 154,310 | 21,296,963 | 21,067,950 | 21,686,417 |
| Stenographers and typists | 24,644 | 24,755 | 24,807 | 3,171,647 | 3,209,817 | 3,253,464 |
| **Maintenance of way and structures** | **452,732** | **462,381** | **467,184** | **41,743,466** | **42,922,484** | **45,107,585** |
| Laborers, extra gang, and work train | 81,820 | 86,026 | 89,357 | 6,470,961 | 6,848,985 | 7,525,853 |
| Laborers, track, and roadway section | 234,519 | 238,302 | 237,305 | 17,078,664 | 17,354,263 | 18,098,685 |
| **Maintenance of equipment and stores** | **457,943** | **454,915** | **454,638** | **60,107,435** | **62,462,778** | **64,589,654** |
| Carmen | 99,266 | 99,434 | 99,165 | 14,757,935 | 15,659,761 | 16,321,332 |
| Machinists | 55,314 | 54,519 | 54,365 | 8,581,953 | 9,003,604 | 9,284,381 |
| Skilled trades helpers | 100,602 | 101,395 | 101,618 | 11,123,885 | 11,982,219 | 12,457,280 |
| Laborers (shops, engine houses, power plants, and stores) | 38,118 | 36,992 | 37,000 | 3,627,060 | 3,509,281 | 3,628,327 |
| Common laborers (shops, engine houses, power plants, and stores) | 52,024 | 52,320 | 52,500 | 4,184,490 | 4,261,795 | 4,416,620 |

TABLE 2.—EMPLOYMENT AND EARNINGS OF RAILROAD EMPLOYEES, JULY, 1928, AND JUNE AND JULY, 1929—Continued

| Occupation | Number of employees at middle of month | | | Total earnings | | |
|---|---|---|---|---|---|---|
| | July, 1928 | June, 1929 | July, 1929 | July, 1928 | June, 1929 | July, 1929 |
| **Transportation, other than train, engine, and yard** | **198,808** | **197,632** | **198,238** | **$25,180,522** | **$24,763,061** | **$25,591,330** |
| Station agents | 29,904 | 29,311 | 29,376 | 4,772,201 | 4,616,158 | 4,807,455 |
| Telegraphers, telephoners, and towermen | 23,462 | 23,227 | 23,291 | 3,684,255 | 3,571,506 | 3,705,233 |
| Truckers (stations, warehouses, and platforms) | 33,652 | 33,864 | 33,541 | 3,212,258 | 3,241,798 | 3,294,846 |
| Crossing and bridge flagmen and gatemen | 21,400 | 20,709 | 20,750 | 1,646,735 | 1,594,046 | 1,605,795 |
| **Transportation (yard masters, switch tenders, and hostlers)** | **22,122** | **21,718** | **21,782** | **4,438,344** | **4,267,384** | **4,424,814** |
| **Transportation, train and engine** | **308,002** | **311,274** | **313,615** | **63,276,033** | **64,042,679** | **67,024,557** |
| Road conductors | 35,472 | 35,363 | 35,749 | 8,483,772 | 8,609,180 | 9,055,829 |
| Road brakemen and flagmen | 70,060 | 69,144 | 69,430 | 12,170,834 | 12,302,678 | 12,932,569 |
| Yard brakemen and yard helpers | 50,433 | 52,357 | 52,761 | 9,030,316 | 9,356,047 | 9,719,308 |
| Road engineers and motormen | 41,768 | 41,700 | 41,975 | 11,649,192 | 11,528,434 | 12,069,782 |
| Road fireman and helpers | 42,836 | 42,311 | 42,425 | 8,607,845 | 8,475,093 | 8,877,940 |
| **Total** | **1,711,823** | **1,719,274** | **1,727,857** | **233,970,323** | **237,758,344** | **246,903,286** |

## Changes in Employment and Pay Rolls in Various States

THE following data as to changes in employment and pay rolls have been compiled from reports received from the various State labor offices.

PER CENT OF CHANGE IN EMPLOYMENT AND PAY ROLLS IN SPECIFIED STATES

*Monthly period*

| State, and industry group | Per cent of change, June to July, 1929 | | State, and industry group | Per cent of change, July to August, 1929 | |
|---|---|---|---|---|---|
| | Employment | Pay roll | | Employment | Pay roll |
| **Illinois** | | | **Iowa** | | |
| Stone, clay, and glass products | −2.2 | −10.0 | Food and kindred products | +1.1 | |
| Metals, machinery, and conveyances | −2.3 | −6.3 | Textiles | +4.9 | |
| Wood products | −1.5 | −13.8 | Iron and steel works | −3.5 | |
| Furs and leather goods | +2.9 | −.9 | Lumber products | +8.8 | |
| Chemicals, oils, paints, etc. | +.5 | −.9 | Leather products | +1.0 | |
| Printing and paper goods | +1.9 | −.1 | Paper products, printing and publishing | −7.0 | |
| Textiles | −1.5 | −1.5 | Patent medicines, chemicals, and compounds | +4.4 | |
| Clothing and millinery | −1.7 | −9.1 | Stone and clay products | +.9 | |
| Food, beverages, and tobacco | +3.2 | +4.2 | Tobacco and cigars | +1.9 | |
| Miscellaneous | +1.0 | −7.9 | Railway car shops | +9.8 | |
| | | | Various industries | +4.7 | |
| All manufacturing | −.7 | −4.5 | All industries | +2.7 | |
| Trade, wholesale and retail | +1.4 | +2.7 | **Maryland** | | |
| Services | +.7 | −.3 | | | |
| Public utilities | +.3 | −3.0 | Food products | +3.0 | +5.5 |
| Coal mining | +7.4 | +2.7 | Textiles | −.9 | +3.8 |
| Building and contracting | +.9 | +4.7 | Iron and steel and their products | +3.7 | +2.4 |
| All industries | −.1 | −3.4 | Lumber and its products | +2.2 | +8.1 |

PER CENT OF CHANGE IN EMPLOYMENT AND PAY ROLLS IN SPECIFIED STATES—Continued

*Monthly period*—Continued

| State, and industry group | Per cent of change, July to August, 1929 | |
|---|---|---|
| | Employment | Pay roll |
| **Maryland**—Continued | | |
| Leather and its products | +3.4 | +11.6 |
| Rubber tires | −13.3 | +4.1 |
| Paper and printing | +.5 | +1.3 |
| Chemicals and allied products | −1.5 | −3.9 |
| Stone, clay, and glass products | +8.6 | +8.8 |
| Metal products, other than iron and steel | −.4 | −4.1 |
| Tobacco products | +19.8 | +19.6 |
| Machinery (not including transportation equipment) | +1.2 | +1.4 |
| Musical instruments | +6.3 | +19.3 |
| Transportation equipment | −6.5 | −8.9 |
| Car building and repairing | +.5 | +5.0 |
| Miscellaneous | −5.9 | −.1 |
| All manufacturing | +.04 | +2.5 |
| Retail department stores | +1.8 | +1.2 |
| Wholesale establishments | −1.2 | −.4 |
| Public utilities | +2.6 | +7.0 |
| Coal mines | −1.7 | −5.2 |
| Hotels | +3.7 | −.03 |
| Quarries | −2.4 | +7.9 |

| Massachusetts | Employment—index numbers (1919–1923=100) | |
|---|---|---|
| | June, 1929 | July, 1929 |
| Boots and shoes | 57.9 | 63.1 |
| Bread and other bakery products | 110.6 | 112.5 |
| Cars and general shop construction and repairs, steam railroads | 69.7 | 70.0 |
| Clothing, men's and women's | 93.3 | 85.8 |
| Confectionery | 76.4 | 78.1 |
| Cotton goods | 58.5 | 56.5 |
| Dyeing and finishing textiles | 105.0 | 100.2 |
| Electrical machinery, apparatus, and supplies | 104.9 | 104.6 |
| Foundry and machine-shop products | 71.8 | 71.4 |
| Furniture | 103.1 | 100.2 |
| Hosiery and knit goods | 68.6 | 54.1 |
| Jewelry | 99.3 | 98.5 |
| Leather, tanned, curried, and finished | 80.3 | 87.8 |
| Paper and wood pulp | 94.0 | 92.9 |
| Printing and publishing | 109.6 | 108.1 |
| Rubber footwear | 88.5 | 92.2 |
| Rubber goods, tires, and tubes | 79.1 | 82.5 |
| Silk goods | 95.7 | 92.9 |
| Textile machinery and parts | 58.8 | 58.4 |
| Woolen and worsted goods | 77.3 | 75.3 |
| All industries | 77.2 | 77.0 |

| State, and industry group | Per cent of change, June to July, 1929 | |
|---|---|---|
| | Employment | Pay roll |
| **New Jersey** | | |
| Food and kindred products | −10.3 | −11.8 |
| Textiles and their products | −1.5 | −5.5 |
| Iron and steel and their products | +1.7 | −1.8 |
| Lumber and its products | +.6 | −5.0 |
| Leather and its products | +.1 | −1.4 |
| Tobacco products | +1.4 | −.3 |
| Paper and printing | −.4 | −3.1 |
| Chemicals and allied products | +.9 | −3.3 |
| Stone, clay, and glass products | −3.8 | −5.3 |
| Metal products, other than iron and steel | +2.1 | −3.4 |
| Vehicles for land transportation | −6.1 | −3.8 |
| Miscellaneous | +7.2 | +4.8 |
| All industries | +.4 | −2.6 |
| **New York** | | |
| Stone, clay, and glass | +.3 | −2.0 |
| Metals and machinery | −.4 | −1.8 |
| Wood manufactures | −2.1 | −3.2 |
| Furs, leather, and rubber goods | +3.9 | +8.6 |
| Chemicals, oils, paints, etc. | +1.3 | (1) |
| Paper | +.3 | +1.9 |
| Printing and paper goods | +.2 | −.7 |
| Textiles | −1.8 | −4.2 |
| Clothing and millinery | −3.1 | −2.7 |
| Food and tobacco | +.8 | −.3 |
| Water, light, and power | +.3 | +1.4 |
| All industries | −.3 | −1.0 |

| Oklahoma | July to August, 1929 | |
|---|---|---|
| Cottonseed-oil mills | +.1 | +12.0 |
| Food production: | | |
| Bakeries | +1.6 | +1.0 |
| Confections | +29.4 | +23.2 |
| Creameries and dairies | +22.7 | −4.6 |
| Flour mills | +9.6 | +8.6 |
| Ice and ice cream | +.1 | +.9 |
| Meat and poultry | +.4 | +1.5 |
| Lead and zinc: | | |
| Mines and mills | +23.0 | +22.5 |
| Smelters | −33.2 | −32.4 |
| Metals and machinery: | | |
| Auto repairs, etc | +5.1 | +6.6 |
| Machine shops and foundries | +2.8 | −8.4 |
| Tank construction and erection | +30.9 | +31.7 |
| Oil industry: | | |
| Production and gasoline manufacture | +13.8 | +21.2 |
| Refineries | +10.1 | +14.2 |
| Printing: Job work | +.7 | +2.2 |
| Public utilities: | | |
| Steam-railway shops | +83.8 | +52.3 |
| Street railways | −3.8 | −7.8 |
| Water, light, and power | +11.5 | +7.3 |

[1] Less than one-tenth of 1 per cent.

PER CENT OF CHANGE IN EMPLOYMENT AND PAY ROLLS IN SPECIFIED STATES—Continued

*Monthly period*—Continued

| State, and industry group | Per cent of change, July to August, 1929 | |
|---|---|---|
| | Employment | Pay roll |
| **Oklahoma**—Continued | | |
| Stone, clay, and glass: | | |
| Brick and tile | +56.5 | +39.5 |
| Cement and plaster | +35.6 | +45.7 |
| Crushed stone | +23.0 | +12.1 |
| Glass manufacture | −2.5 | −9.9 |
| Textiles and cleaning: | | |
| Textile manufacture | −1.3 | −3.0 |
| Laundries, etc | +39.7 | +43.0 |
| Woodworking: | | |
| Sawmills | +13.2 | +25.4 |
| Millwork, etc | +8.3 | +8.2 |
| All industries | +11.4 | +11.3 |
| | Index numbers (1923–1925 = 100)—employment | |
| | July, 1929 | August, 1929 |
| **Pennsylvania** | | |
| Metal products | 95.7 | 98.9 |
| Transportation equipment | 83.9 | [1] 75.5 |
| Textile products | 97.0 | 100.2 |
| Foods and tobacco | 96.3 | 96.8 |
| Stone, clay, and glass products | 83.7 | 83.7 |
| Lumber products | 82.6 | 81.9 |
| Chemical products | 108.5 | 108.9 |
| Leather and rubber products | 97.7 | 100.5 |
| Paper and printing | 94.8 | 94.5 |
| All industries | 94.9 | 96.0 |
| | Pay roll | |
| Metal products | 99.6 | 109.1 |
| Transportation equipment | 82.5 | [1] 75.7 |
| Textile products | 99.9 | 105.7 |
| Foods and tobacco | 97.6 | 97.7 |
| Stone, clay, and glass products | 78.9 | 85.5 |
| Lumber products | 77.0 | 82.6 |
| Chemical products | 116.0 | 120.1 |
| Leather and rubber products | 100.4 | 107.1 |
| Paper and printing | 103.3 | 109.1 |
| All industries | 96.8 | 102.6 |

| State, and industry group | Per cent of change, June to July, 1929 | |
|---|---|---|
| | Employment | Pay roll |
| **Wisconsin** | | |
| *Manual* | | |
| Logging | −0.5 | +0.3 |
| Mining | −5.3 | −6.8 |
| Stone crushing and quarrying | +2.3 | −3.0 |
| Manufacturing: | | |
| Stone and allied industries | −5.6 | −7.1 |
| Metal | −4.3 | −11.4 |
| Wood | −2.0 | −8.3 |
| Rubber | −2.4 | −13.6 |
| Leather | +2.5 | −1.5 |
| Paper | +1.3 | −8.8 |
| Textiles | +.3 | −7.1 |
| Foods | +39.5 | +18.0 |
| Light and power | +2.9 | +3.3 |
| Printing and publishing | +.7 | −1.4 |
| Laundering, cleaning, and dyeing | +3.0 | +1.6 |
| Chemicals (including soap, glue, and explosives) | +1.4 | −5.8 |
| All manufacturing | +1.8 | −6.3 |
| Construction: | | |
| Building | +2.9 | +6.8 |
| Highway | +2.5 | +1.9 |
| Railroad | +2.4 | +.7 |
| Marined redging, sewer digging | −39.9 | −35.0 |
| Communication: | | |
| Steam railways | −.8 | −1.7 |
| Electric railways | −.5 | −4.9 |
| Express, telephone, and telegraph | +9.9 | +6.3 |
| Wholesale trade | −4.7 | −3.3 |
| Hotels and restaurants [2] | −1.1 | ---------- |
| *Nonmanual* | | |
| Manufacturing, mines, and quarries | +.5 | +.3 |
| Construction | +1.0 | +1.4 |
| Communication | +1.0 | −1.0 |
| Wholesale trade | +1.4 | +3.6 |
| Retail trade—sales force only | −11.6 | −11.1 |
| Miscellaneous professional services | +.4 | +.4 |

[1] Preliminary figures.

[2] Manual and nonmanual combined.

PER CENT OF CHANGE IN EMPLOYMENT AND PAY ROLLS IN SPECIFIED STATES—Continued

*Yearly period*

| State, and industry group | Per cent of change, July, 1928, to July, 1929 | |
|---|---|---|
| | Employment | Pay roll |
| **California** | | |
| Stone, clay, and glass products | +2.8 | +3.5 |
| Metals, machinery, and conveyances | +18.9 | +19.8 |
| Wood manufactures | .0 | −1.1 |
| Leather and rubber goods | +19.5 | +14.7 |
| Chemicals, oils, paints, etc. | +21.6 | +24.6 |
| Printing and paper goods | +5.1 | +6.3 |
| Textiles | +4.5 | +18.3 |
| Clothing, millinery, and laundering | +6.1 | +9.9 |
| Foods, beverages, and tobacco | +14.9 | +15.6 |
| Water, light, and power | −2.9 | −12.5 |
| Miscellaneous | +14.6 | −4.0 |
| All industries | +12.3 | +13.3 |

| State, and industry group | Employment—index numbers (1925–1927=100) | |
|---|---|---|
| | July, 1928 | July, 1929 |
| **Illinois** | | |
| Stone, clay, and glass products | 99.6 | 93.5 |
| Metals, machinery, and conveyances | 93.2 | 112.8 |
| Wood products | 77.3 | 72.1 |
| Furs and leather goods | 101.1 | 106.2 |
| Chemicals, oils, paints, etc. | 99.7 | 106.7 |
| Printing and paper goods | 102.4 | 100.7 |
| Textiles | 86.6 | 92.1 |
| Clothing and millinery | 91.1 | 88.0 |
| Foods, beverages, and tobacco | 95.1 | 95.9 |
| All manufacturing | 93.9 | 103.4 |
| Trade, wholesale and retail | 90.1 | 85.2 |
| Public utilities | 104.2 | 107.5 |
| Coal mining | 50.4 | 69.3 |
| Building and contracting | 100.5 | 87.1 |
| All industries | 94.5 | 101.5 |

| State, and industry group | (1919–1923=100) | |
|---|---|---|
| **Massachusetts** | | |
| Boots and shoes | 64.7 | 63.1 |
| Bread and other bakery products | 103.1 | 112.5 |
| Cars and general shop construction and repairs, steam railroads | 68.9 | 70.0 |
| Clothing, men's and women's | 83.0 | 85.8 |
| Confectionery | 74.5 | 78.1 |
| Cotton goods | 41.0 | 56.5 |
| Dyeing and finishing textiles | 96.3 | 100.2 |
| Electric machinery, apparatus, and supplies | 101.5 | 104.6 |

| State, and industry group | Employment—index numbers (1919–1923=100) | |
|---|---|---|
| | July, 1928 | July, 1929 |
| **Massachusetts**—Contd. | | |
| Foundry and machine-shop products | 65.5 | 71.4 |
| Furniture | 96.0 | 100.2 |
| Hosiery and knit goods | 61.3 | 54.1 |
| Jewelry | 101.1 | 98.5 |
| Leather, tanned, curried, and finished | 81.4 | 87.8 |
| Paper and wood pulp | 90.3 | 92.9 |
| Printing and publishing | 104.4 | 108.1 |
| Rubber footwear | 96.9 | 92.2 |
| Rubber goods, tires, and tubes | 85.4 | 82.5 |
| Silk goods | 104.7 | 92.9 |
| Textile machinery and parts | 51.5 | 58.4 |
| Woolen and worsted goods | 80.2 | 75.3 |
| All industries | 72.9 | 77.0 |

| State, and industry group | Per cent of change, July, 1928, to July, 1929 | |
|---|---|---|
| | Employment | Pay roll |
| **New York** | | |
| Stone, clay, and glass | +3.9 | +3.1 |
| Metals and machinery | +15.6 | +19.6 |
| Wood manufactures | −2.8 | −2.6 |
| Furs, leather, and rubber goods | +4.4 | +5.8 |
| Chemicals, oils, paints, etc. | +7.4 | +9.1 |
| Paper | +3.4 | +5.3 |
| Printing and paper goods | +4.2 | +6.7 |
| Textiles | +3.6 | +4.9 |
| Clothing and millinery | +2.1 | +1.4 |
| Food and tobacco | −3.0 | −3.2 |
| Water, light, and power | −5.7 | −3.7 |
| All industries | +7.1 | +9.4 |

| State, and industry group | August, 1928, to August, 1929 | |
|---|---|---|
| **Oklahoma** | | |
| Cottonseed-oil mills | +93.7 | +125.2 |
| Food production: | | |
| Bakeries | −27.0 | −4.5 |
| Confections | −13.7 | +5.4 |
| Creameries and dairies | +21.3 | +18.1 |
| Flour mills | +20.2 | +16.9 |
| Ice and ice cream | +20.3 | +13.6 |
| Meat and poultry | +1.6 | −.8 |
| Lead and zinc: | | |
| Mines and mills | +68.2 | +65.4 |
| Smelters | −33.9 | −32.4 |
| Metals and machinery: | | |
| Auto repairs, etc. | +57.1 | +53.9 |
| Machine shops and foundries | +22.6 | +23.6 |
| Tank construction and erection | +21.5 | +20.8 |
| Oil industry: | | |
| Producing and gasoline manufacture | +57.0 | +52.3 |
| Refineries | +17.8 | +4.9 |
| Printing: Job work | +6.3 | +3.4 |

PER CENT OF CHANGE IN EMPLOYMENT AND PAY ROLLS IN SPECIFIED STATES—Continued

*Yearly period*—Continued

| State, and industry group | Per cent of change, August, 1928, to August, 1929 | |
|---|---|---|
| | Employment | Pay roll |
| **Oklahoma**—Continued | | |
| Public utilities: | | |
| Steam-railway shops | +4.2 | +4.1 |
| Street railways | +16.4 | +13.0 |
| Water, light, and power | +97.6 | +76.3 |
| Stone, clay, and glass: | | |
| Brick and tile | −8.8 | −12.4 |
| Cement and plaster | +5.6 | +3.1 |
| Crushed stone | +304.6 | +159.6 |
| Glass manufacture | −15.2 | −15.4 |
| Textiles and cleaning: | | |
| Textile manufacture | −18.2 | −.2 |
| Laundries, etc | +4.4 | +11.1 |
| Woodworking: | | |
| Sawmills | −13.3 | +.8 |
| Millwork, etc | −10.4 | −9.6 |
| All industries | +25.2 | +22.5 |
| | Index numbers (1923–1925=100)—employment | |
| | August, 1928 | August, 1929 |
| **Pennsylvania** | | |
| Metal products | 85.2 | 98.9 |
| Transportation equipment | 74.7 | [2] 75.5 |
| Textile products | 95.1 | 100.2 |
| Foods and tobacco | 99.6 | 96.8 |
| Stone, clay, and glass products | 86.5 | 83.7 |
| Lumber products | 84.5 | 81.9 |
| Chemical products | 94.4 | 108.9 |
| Leather and rubber products | 97.7 | 100.5 |
| Paper and printing | 93.1 | 94.5 |
| All industries | 86.5 | 96.0 |
| | Pay roll | |
| Metal products | 89.7 | 109.1 |
| Transportation equipment | 76.2 | [2] 75.7 |
| Textile products | 97.8 | 105.7 |
| Foods and tobacco | 98.0 | 97.7 |
| Stone, clay, and glass products | 87.6 | 85.5 |
| Lumber products | 86.9 | 82.6 |
| Chemical products | 103.6 | 120.1 |
| Leather and rubber products | 103.9 | 107.1 |
| Paper and printing | 104.7 | 109.1 |
| All industries | 88.9 | 102.6 |

| State, and industry group | Per cent of change, July, 1928, to July 1929 | |
|---|---|---|
| | Employment | Pay roll |
| **Wisconsin** | | |
| *Manual* | | |
| Logging | +30.8 | −14.9 |
| Mining | −.9 | +19.5 |
| Stone crushing and quarrying | −.9 | +1.5 |
| Manufacturing: | | |
| Stone and allied industries | −15.0 | −12.1 |
| Metal | +.8 | −2.5 |
| Wood | +3.9 | −2.6 |
| Rubber | +10.2 | −.2 |
| Leather | +17.6 | +18.5 |
| Paper | +8.2 | +6.8 |
| Textiles | −1.7 | +7.3 |
| Foods | +2.8 | +7.0 |
| Light and power | +2.4 | +7.3 |
| Printing and publishing | +11.4 | +10.2 |
| Laundering, cleaning, and dyeing | +3.1 | +2.7 |
| Chemical (including soap, glue, and explosives) | −21.3 | −26.3 |
| All manufacturing | +3.6 | +1.5 |
| Construction: | | |
| Building | −7.8 | +1.7 |
| Highway | −.1 | +.9 |
| Railroad | −15.8 | −12.6 |
| Marine, dredging, sewer digging | +32.7 | +36.8 |
| Communication: | | |
| Steam railways | +1.0 | +7.0 |
| Electric railways | −7.0 | −3.5 |
| Express, telephone, and telegraph | +19.2 | +16.4 |
| Wholesale trade | +6.7 | +10.0 |
| Hotels and restaurants [1] | −5.0 | ---------- |
| *Nonmanual* | | |
| Manufacturing, mines, and quarries | +4.2 | +6.5 |
| Construction | −1.6 | −.4 |
| Communication | +11.0 | +10.4 |
| Wholesale trade | +3.1 | +6.7 |
| Retail trade—sales force only | +6.7 | +9.8 |
| Miscellaneous professional services | +2.1 | +9.6 |

[2] Preliminary figures.

[1] Manual and nonmanual combined.

# WHOLESALE AND RETAIL PRICES

## Retail Prices of Food in the United States

THE following tables are compiled from monthly reports of actual selling prices [1] received by the Bureau of Labor Statistics from retail dealers.

Table 1 shows for the United States retail prices of food August 15, 1928, July 15 and August 15, 1929, as well as the percentage changes in the year and in the month. For example, the retail price per pound of flour was 5.4 cents on August 15, 1928; 5.0 cents on July 15, 1929; and 5.2 cents on August 15, 1929. These figures show a decrease of 4 per cent in the year and an increase of 4 per cent in the month.

The cost of various articles of food combined shows an increase of 3.8 per cent August 15, 1929, as compared with August 15, 1928, and an increase of 1.1 per cent August 15, 1929, as compared with July 15, 1929.

[1] In addition to monthly retail prices of food and coal, the bureau publishes the prices of gas and electricity from each of 51 cities for the dates for which these data are secured.

TABLE 1.—AVERAGE RETAIL PRICES OF SPECIFIED FOOD ARTICLES AND PER CENT OF INCREASE OR DECREASE AUGUST 15, 1929, COMPARED WITH JULY 15, 1929, AND AUGUST 15, 1928

[Percentage changes of five-tenths of 1 per cent and over are given in whole numbers]

| Article | Unit | Average retail prices on | | | Per cent of increase (+) or decrease (−) Aug. 15, 1929, compared with— | |
|---|---|---|---|---|---|---|
| | | Aug. 15, 1928 | July 15, 1929 | Aug. 15, 1929 | Aug. 15, 1928 | July 15, 1929 |
| | | *Cents* | *Cents* | *Cents* | | |
| Sirloin steak | Pound | 51.0 | 52.5 | 52.4 | +3 | −0.2 |
| Round steak | do | 45.1 | 47.0 | 47.0 | +4 | 0 |
| Rib roast | do | 36.6 | 38.2 | 38.0 | +4 | −1 |
| Chuck roast | do | 29.6 | 31.3 | 31.1 | +5 | −1 |
| Plate beef | do | 19.6 | 21.5 | 21.3 | +9 | −1 |
| Pork chops | do | 39.9 | 39.5 | 40.1 | +1 | +2 |
| Bacon, sliced | do | 44.8 | 44.3 | 44.7 | −0.2 | +1 |
| Ham, sliced | do | 55.0 | 56.4 | 56.8 | +3 | +1 |
| Lamb, leg of | do | 40.2 | 41.1 | 40.3 | +0.2 | −2 |
| Hens | do | 36.8 | 39.9 | 39.4 | +7 | −1 |
| Salmon, canned, red | do | 34.2 | 31.5 | 31.6 | −8 | +0.3 |
| Milk, fresh | Quart | 14.1 | 14.3 | 14.3 | +1 | 0 |
| Milk, evaporated | 16-oz. can | 11.2 | 10.9 | 10.8 | −4 | −1 |
| Butter | Pound | 55.4 | 53.4 | 53.7 | −3 | +1 |
| Oleomargarine (all butter substitutes). | do | 27.3 | 27.2 | 27.1 | −1 | −0.4 |
| Cheese | do | 38.4 | 37.9 | 37.8 | −2 | −0.3 |
| Lard | do | 18.7 | 18.3 | 18.4 | −2 | +1 |
| Vegetable lard substitute | do | 24.8 | 24.8 | 24.8 | 0 | 0 |
| Eggs, strictly fresh | Dozen | 45.0 | 44.1 | 48.2 | +7 | +9 |
| Bread | Pound | 9.2 | 9.0 | 9.0 | −2 | 0 |
| Flour | do | 5.4 | 5.0 | 5.2 | −4 | +4 |
| Corn meal | do | 5.3 | 5.3 | 5.3 | 0 | 0 |
| Rolled oats | do | 8.9 | 8.8 | 8.9 | 0 | +1 |
| Corn flakes | 8-oz. package | 9.5 | 9.5 | 9.5 | 0 | 0 |
| Wheat cereal | 28-oz. package | 25.6 | 25.5 | 25.5 | −0.4 | 0 |
| Macaroni | Pound | 19.8 | 19.6 | 19.7 | −1 | +1 |
| Rice | do | 9.9 | 9.7 | 9.8 | −1 | +1 |
| Beans, navy | do | 12.6 | 14.3 | 14.4 | +14 | +1 |
| Potatoes | do | 2.2 | 3.9 | 4.0 | +82 | +3 |
| Onions | do | 5.4 | 7.0 | 6.4 | +19 | −9 |
| Cabbage | do | 4.1 | 4.8 | 5.6 | +37 | +17 |
| Beans, baked | No. 2 can | 11.6 | 11.9 | 11.9 | +3 | 0 |
| Corn, canned | do | 15.9 | 15.8 | 15.8 | −1 | 0 |
| Peas, canned | do | 16.7 | 16.6 | 16.6 | −1 | 0 |
| Tomatoes, canned | do | 11.6 | 13.8 | 13.8 | +19 | 0 |
| Sugar | Pound | 7.1 | 6.4 | 6.6 | −7 | +3 |
| Tea | do | 77.4 | 77.4 | 77.5 | +0.1 | +0.1 |
| Coffee | do | 49.4 | 49.4 | 49.3 | −0.2 | −0.2 |
| Prunes | do | 13.8 | 14.7 | 15.0 | +9 | +2 |
| Raisins | do | 13.5 | 11.7 | 11.8 | −13 | +1 |
| Bananas | Dozen | 31.6 | 32.1 | 31.9 | +1 | −1 |
| Oranges | do | 64.2 | 44.8 | 45.5 | −29 | +2 |
| Weighted food index | | | | | +3.8 | +1.1 |

Table 2 shows for the United States average retail prices of specified food articles on August 15, 1913, and on August 15 of each year from 1923 to 1929, together with percentage changes in August of each of these specified years, compared with August, 1913. For example, the retail price per pound of rice was 8.7 cents in August, 1913; 9.4 cents in August, 1923; 10.2 cents in August, 1924; 11.3 cents in August, 1925; 11.6 cents in August, 1926; 10.7 cents in August, 1927; 9.9 cents in August, 1928; and 9.8 cents in August, 1929.

As compared with August, 1913, these figures show increases of 8 per cent in August, 1923; 17 per cent in August, 1924; 30 per cent in

August, 1925; 33 per cent in August, 1926; 23 per cent in August, 1927; 14 per cent in August, 1928; and 13 per cent in August, 1929.

The cost of the various articles of food combined showed an increase of 58.8 per cent in August, 1929, as compared with August, 1913.

TABLE 2.—AVERAGE RETAIL PRICES OF SPECIFIED FOOD ARTICLES AND PER CENT OF INCREASE AUGUST 15 OF CERTAIN SPECIFIED YEARS COMPARED WITH AUGUST 15, 1913

[Percentage changes of five-tenths of 1 per cent and over are given in whole numbers]

| Article | Average retail price on Aug. 15— | | | | | | | | Per cent of increase Aug. 15 of each specified year compared with Aug. 15, 1913— | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1913 | 1923 | 1924 | 1925 | 1926 | 1927 | 1928 | 1929 | 1923 | 1924 | 1925 | 1926 | 1927 | 1928 | 1929 |
| | *Cts.* | *Cts.* | *Cts.* | *Cts.* | *Cts.* | *Cts.* | *Cts.* | *Cts.* | | | | | | | |
| Sirloin steak..pound.. | 26.4 | 41.1 | 40.7 | 42.0 | 41.8 | 43.7 | 51.0 | 52.4 | 56 | 54 | 59 | 58 | 66 | 93 | 98 |
| Round steak....do.... | 23.2 | 35.5 | 34.8 | 36.2 | 36.2 | 38.1 | 45.1 | 47.0 | 53 | 50 | 56 | 56 | 64 | 94 | 103 |
| Rib roast.....do.... | 20.2 | 29.2 | 29.1 | 30.3 | 30.4 | 31.7 | 36.6 | 38.0 | 45 | 44 | 50 | 50 | 57 | 81 | 88 |
| Chuck roast.....do.... | 16.5 | 20.8 | 21.0 | 22.1 | 22.5 | 23.9 | 29.6 | 31.1 | 26 | 27 | 34 | 36 | 45 | 79 | 88 |
| Plate beef.....do.... | 12.2 | 12.7 | 13.1 | 13.9 | 14.3 | 15.3 | 19.6 | 21.3 | 4 | 7 | 14 | 17 | 25 | 61 | 75 |
| Pork chops.....do.... | 21.9 | 32.1 | 34.8 | 40.0 | 40.5 | 37.7 | 39.9 | 40.1 | 47 | 59 | 83 | 85 | 72 | 82 | 83 |
| Bacon, sliced....do.... | 28.3 | 39.2 | 38.3 | 49.3 | 52.0 | 46.5 | 44.8 | 44.7 | 39 | 35 | 74 | 84 | 64 | 58 | 58 |
| Ham, sliced.....do.... | 28.4 | 46.3 | 46.6 | 54.9 | 60.7 | 54.3 | 55.0 | 56.8 | 63 | 64 | 93 | 114 | 91 | 94 | 100 |
| Lamb, leg of....do.... | 18.9 | 37.2 | 37.3 | 38.7 | 39.2 | 39.2 | 40.2 | 40.3 | 97 | 97 | 105 | 107 | 107 | 113 | 113 |
| Hens.....do.... | 21.5 | 34.5 | 34.8 | 36.2 | 37.9 | 35.4 | 36.8 | 39.4 | 60 | 62 | 68 | 76 | 65 | 71 | 83 |
| Salmon, canned, red ..... pound.. | ..... | 31.2 | 31.2 | 32.3 | 38.2 | 32.9 | 34.2 | 31.6 | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Milk, fresh.....quart.. | 8.8 | 13.7 | 13.7 | 13.9 | 13.9 | 14.1 | 14.1 | 14.3 | 56 | 56 | 58 | 58 | 60 | 60 | 63 |
| Milk, evaporated ..... 16-ounce can.. | ..... | 12.2 | 11.1 | 11.5 | 11.4 | 11.6 | 11.2 | 10.8 | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Butter.....pound.. | 35.4 | 51.8 | 48.3 | 54.1 | 50.6 | 51.4 | 55.4 | 53.7 | 46 | 36 | 53 | 43 | 45 | 56 | 52 |
| Oleomargarine (all butter substitutes) ..... pound.. | ..... | 28.3 | 29.6 | 30.3 | 30.2 | 28.0 | 27.3 | 27.1 | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Cheese.....do.... | 22.0 | 36.3 | 34.4 | 36.8 | 35.7 | 37.0 | 38.4 | 37.8 | 65 | 56 | 67 | 62 | 68 | 75 | 72 |
| Lard.....do.... | 16.1 | 17.1 | 19.3 | 24.3 | 22.7 | 18.9 | 18.7 | 18.4 | 6 | 20 | 51 | 41 | 17 | 16 | 14 |
| Vegetable lard substitute.....pound.. | ..... | 22.8 | 25.2 | 25.9 | 25.9 | 25.0 | 24.8 | 24.8 | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Eggs, strictly fresh .....dozen.. | 33.0 | 41.5 | 44.6 | 48.9 | 44.9 | 42.0 | 45.0 | 48.2 | 26 | 35 | 48 | 36 | 27 | 36 | 46 |
| Bread.....pound.. | 5.6 | 8.7 | 8.8 | 9.4 | 9.4 | 9.3 | 9.2 | 9.0 | 55 | 57 | 68 | 68 | 66 | 64 | 61 |
| Flour.....do.... | 3.3 | 4.5 | 5.1 | 6.1 | 6.0 | 5.6 | 5.4 | 5.2 | 36 | 55 | 85 | 82 | 70 | 64 | 58 |
| Corn meal.....do.... | 3.0 | 4.1 | 4.7 | 5.4 | 5.1 | 5.2 | 5.3 | 5.3 | 37 | 57 | 80 | 70 | 73 | 77 | 77 |
| Rolled oats.....do.... | ..... | 8.8 | 8.8 | 9.2 | 9.0 | 9.0 | 8.9 | 8.9 | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Corn flakes ..... 8-ounce package.. | ..... | 9.7 | 9.6 | 10.9 | 10.9 | 9.7 | 9.5 | 9.5 | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Wheat cereal ..... 28-ounce package.. | ..... | 24.4 | 24.3 | 24.6 | 25.4 | 25.5 | 25.6 | 25.5 | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Macaroni.....pound.. | ..... | 19.8 | 19.6 | 20.4 | 20.2 | 20.1 | 19.8 | 19.7 | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Rice.....do.... | 8.7 | 9.4 | 10.2 | 11.3 | 11.6 | 10.7 | 9.9 | 9.8 | 8 | 17 | 30 | 33 | 23 | 14 | 13 |
| Beans, navy....do.... | ..... | 11.0 | 9.7 | 10.3 | 9.2 | 9.5 | 12.6 | 14.4 | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Potatoes.....do.... | 1.9 | 3.7 | 2.6 | 4.4 | 3.6 | 3.4 | 2.2 | 4.0 | 95 | 37 | 132 | 89 | 79 | 16 | 111 |
| Onions.....do.... | ..... | 6.5 | 6.5 | 8.0 | 5.9 | 6.4 | 5.4 | 6.4 | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Cabbage.....do.... | ..... | 4.8 | 4.3 | 5.5 | 4.3 | 4.4 | 4.1 | 5.6 | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Beans, baked ..... No. 2 can.. | ..... | 12.9 | 12.6 | 12.4 | 11.8 | 11.5 | 11.6 | 11.9 | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Corn, canned....do.... | ..... | 15.4 | 15.9 | 18.4 | 16.4 | 15.6 | 15.9 | 15.8 | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Peas, canned....do.... | ..... | 17.6 | 18.2 | 18.4 | 17.5 | 16.7 | 16.7 | 16.6 | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Tomatoes, canned ..... No. 2 can.. | ..... | 13.0 | 13.3 | 13.7 | 11.8 | 12.0 | 11.6 | 13.8 | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Sugar, granulated ..... pound.. | 5.6 | 9.6 | 8.2 | 7.0 | 7.0 | 7.3 | 7.1 | 6.6 | 71 | 46 | 25 | 25 | 30 | 27 | 18 |
| Tea.....do.... | 54.4 | 69.7 | 70.9 | 75.9 | 77.1 | 77.6 | 77.4 | 77.5 | 28 | 30 | 40 | 42 | 43 | 42 | 42 |
| Coffee.....do.... | 29.8 | 37.6 | 43.4 | 50.9 | 51.0 | 47.4 | 49.4 | 49.3 | 26 | 46 | 71 | 71 | 59 | 66 | 65 |
| Prunes.....do.... | ..... | 19.0 | 17.3 | 17.3 | 17.2 | 15.5 | 13.8 | 15.0 | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Raisins.....do.... | ..... | 17.4 | 15.4 | 14.4 | 14.8 | 14.3 | 13.5 | 11.8 | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Bananas.....dozen.. | ..... | 38.4 | 35.4 | 34.5 | 34.5 | 33.7 | 31.6 | 31.9 | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Oranges [1].....do.... | ..... | 50.9 | 46.1 | 59.8 | 50.7 | 53.8 | 64.2 | 45.5 | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| All articles combined.. | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 45.1 | 42.9 | 59.0 | 54.3 | 51.1 | 52.9 | 58.8 |

[1] Beginning with Jan. 1, 1921, the index numbers showing the trend in the retail cost of food have been composed of the articles shown in Tables 1 and 2, weighted according to the consumption of the average family. From January, 1913, to December, 1920, the index numbers included the following articles: Sirloin steak, round steak, rib roast, chuck roast, plate beef, pork chops, bacon, ham, lard, hens, flour, corn meal, eggs, butter, milk, bread, potatoes, sugar, cheese, rice, coffee, and tea.

Table 3 shows the trend in the retail cost of three important groups of food commodities, viz, cereals, meats, and dairy products, by years, from 1913 to 1928, and by months for 1927, 1928, and 1929. The articles within these groups are as follows:

Cereals: Bread, flour, corn meal, rice, rolled oats, corn flakes, wheat cereal, and macaroni.

Meats: Sirloin steak, round steak, rib roast, chuck roast, plate beef, pork chops, bacon, ham, hens, and leg of lamb.

Dairy products: Butter, cheese, fresh milk, and evaporated milk.

TABLE 3.—INDEX NUMBERS OF RETAIL COST OF CEREALS, MEATS, AND DAIRY PRODUCTS FOR THE UNITED STATES, 1913 TO AUGUST, 1929

[Average cost in 1913=100.0]

| Year and month | Cereals | Meats | Dairy products | Year and month | Cereals | Meats | Dairy products |
|---|---|---|---|---|---|---|---|
| 1913: Average for year | 100.0 | 100.0 | 100.0 | 1928: Average for year | 167.2 | 179.2 | 150.0 |
| 1914: Average for year | 106.7 | 103.4 | 97.1 | January | 168.0 | 168.3 | 152.2 |
| 1915: Average for year | 121.6 | 99.6 | 96.1 | February | 168.0 | 167.8 | 150.7 |
| 1916: Average for year | 126.8 | 108.2 | 103.2 | March | 166.8 | 167.1 | 150.7 |
| 1917: Average for year | 186.5 | 137.0 | 127.6 | April | 167.2 | 170.3 | 147.8 |
| 1918: Average for year | 194.3 | 172.8 | 153.4 | May | 168.3 | 175.4 | 147.3 |
| 1919: Average for year | 198.0 | 184.2 | 176.6 | June | 169.8 | 177.7 | 146.1 |
| 1920: Average for year | 232.1 | 185.7 | 185.1 | July | 169.3 | 184.4 | 147.1 |
| 1921: Average for year | 179.8 | 158.1 | 149.5 | August | 168.2 | 189.5 | 148.3 |
| 1922: Average for year | 159.3 | 150.3 | 135.9 | September | 166.7 | 195.8 | 151.2 |
| 1923: Average for year | 156.9 | 149.0 | 147.6 | October | 165.9 | 188.9 | 151.1 |
| 1924: Average for year | 160.4 | 150.2 | 142.8 | November | 165.3 | 184.9 | 152.5 |
| 1925: Average for year | 176.2 | 163.0 | 147.1 | December | 164.2 | 179.1 | 153.5 |
| 1926: Average for year | 175.5 | 171.3 | 145.5 | 1929: | | | |
| 1927: Average for year | 170.7 | 169.9 | 148.7 | January | 164.1 | 180.9 | 151.9 |
| January | 172.8 | 168.1 | 151.4 | February | 164.1 | 180.3 | 152.6 |
| February | 172.7 | 167.6 | 151.8 | March | 164.1 | 182.8 | 152.4 |
| March | 172.1 | 168.5 | 152.2 | April | 164.1 | 187.5 | 148.9 |
| April | 171.7 | 170.6 | 150.8 | May | 163.5 | 191.2 | 147.5 |
| May | 171.6 | 170.7 | 145.3 | June | 163.0 | 192.4 | 146.8 |
| June | 170.7 | 168.3 | 143.7 | July | 163.4 | 195.9 | 146.8 |
| July | 170.6 | 169.3 | 143.9 | August | 164.7 | 195.8 | 147.0 |
| August | 171.2 | 171.0 | 144.5 | | | | |
| September | 170.6 | 173.0 | 146.6 | | | | |
| October | 170.5 | 173.7 | 149.4 | | | | |
| November | 169.8 | 169.9 | 150.2 | | | | |
| December | 168.6 | 168.1 | 152.8 | | | | |

### Index Numbers of Retail Prices of Food in the United States

IN TABLE 4 index numbers are given which show the changes in the retail prices of specified food articles, by years for 1913 and 1920 to 1928,[2] and by months for 1928 through August, 1929. These index numbers, or relative prices, are based on the year 1913 as 100 and are computed by dividing the average price of each commodity for each month and each year by the average price of that commodity for 1913. These figures must be used with caution. For example, the relative price of sirloin steak for the year 1928 was 188.2, which means that the average money price for the year 1928 was 88.2 per cent higher than the average money price for the year 1913. As compared with the relative price, 167.7 in 1927, the figures for 1928 show an increase of 20½ points, but an increase of 12.2 per cent in the year.

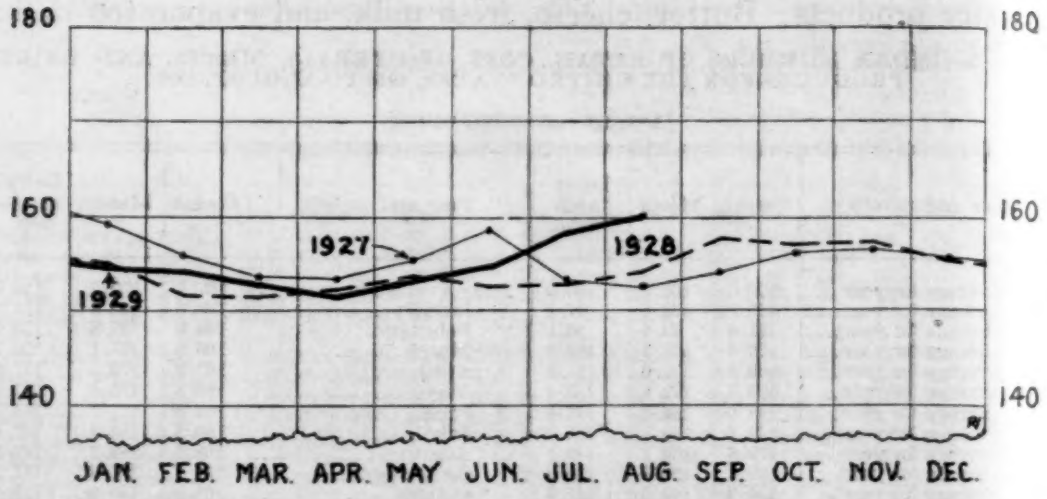
In the last column of Table 4 are given index numbers showing changes in the retail cost of all articles of food combined. Since January, 1921, these index numbers have been computed from the

[2] For index numbers of each month, January, 1913, to December, 1927, see Bulletin No. 396, pp. 44 to 61; Bulletin No. 418, pp. 38 to 51; Bulletin No. 445, pp. 36 to 49; and Bulletin No. 464, pp. 36 to 49.

average prices of the articles of food shown in Tables 1 and 2, weighted according to the average family consumption in 1918. (See March, 1921, issue, p. 25.) Although previous to January, 1921, the number of food articles has varied, these index numbers have been so computed as to be strictly comparable for the entire period. The index

TREND OF RETAIL PRICES OF FOOD

[1913=100]




numbers based on the average for the year 1913 as 100 are 158.5 for July, 1929, and 160.2 for August, 1929.

The curve shown in the accompanying chart pictures more readily to the eye the changes in the cost of the food budget than do the index numbers given in the table.

TABLE 4.—INDEX NUMBERS OF RETAIL PRICES OF PRINCIPAL ARTICLES OF FOOD BY YEARS, 1913, 1920 TO 1928, AND BY MONTHS FOR JANUARY, 1928, THROUGH AUGUST, 1929

[Average for year 1913=100.0]

| Year and month | Sirloin steak | Round steak | Rib roast | Chuck roast | Plate beef | Pork chops | Bacon | Ham | Hens | Milk | Butter | Cheese |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1913 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| 1920 | 172.1 | 177.1 | 167.7 | 163.8 | 151.2 | 201.4 | 193.7 | 206.3 | 209.9 | 187.6 | 183.0 | 188.2 |
| 1921 | 152.8 | 154.3 | 147.0 | 132.5 | 118.2 | 166.2 | 158.2 | 181.4 | 186.4 | 164.0 | 135.0 | 153.9 |
| 1922 | 147.2 | 144.8 | 139.4 | 123.1 | 105.8 | 157.1 | 147.4 | 181.4 | 169.0 | 147.2 | 125.1 | 148.9 |
| 1923 | 153.9 | 150.2 | 143.4 | 126.3 | 106.6 | 144.8 | 144.8 | 169.1 | 164.3 | 155.1 | 144.7 | 167.0 |
| 1924 | 155.9 | 151.6 | 145.5 | 130.0 | 109.1 | 146.7 | 139.6 | 168.4 | 165.7 | 155.1 | 135.0 | 159.7 |
| 1925 | 159.8 | 155.6 | 149.5 | 135.0 | 114.1 | 174.3 | 173.0 | 195.5 | 171.8 | 157.3 | 143.1 | 166.1 |
| 1926 | 162.6 | 159.6 | 153.0 | 140.6 | 120.7 | 188.1 | 186.3 | 213.4 | 182.2 | 157.3 | 138.6 | 165.6 |
| 1927 | 167.7 | 166.4 | 158.1 | 148.1 | 127.3 | 175.2 | 174.8 | 204.5 | 173.2 | 158.4 | 145.2 | 170.1 |
| 1928 | 188.2 | 188.3 | 176.8 | 174.4 | 157.0 | 165.7 | 163.0 | 196.7 | 175.6 | 159.6 | 147.5 | 174.2 |
| 1928: January | 174.8 | 173.1 | 165.2 | 158.8 | 142.1 | 149.0 | 165.2 | 192.2 | 172.8 | 160.7 | 150.9 | 177.4 |
| February | 176.4 | 174.4 | 167.2 | 160.6 | 144.6 | 140.5 | 161.9 | 190.3 | 174.6 | 160.7 | 147.0 | 177.4 |
| March | 176.8 | 175.3 | 167.2 | 161.3 | 146.3 | 136.2 | 159.3 | 187.7 | 174.6 | 159.6 | 149.6 | 174.2 |
| April | 178.3 | 177.6 | 168.7 | 163.1 | 147.9 | 149.0 | 158.9 | 188.1 | 177.0 | 158.4 | 143.9 | 172.9 |
| May | 181.5 | 181.2 | 172.2 | 166.3 | 150.4 | 168.6 | 159.6 | 190.3 | 177.0 | 158.4 | 142.6 | 172.4 |
| June | 186.6 | 186.5 | 175.3 | 172.5 | 152.9 | 165.7 | 160.6 | 192.2 | 174.2 | 157.3 | 140.7 | 172.4 |
| July | 195.7 | 196.9 | 181.8 | 180.6 | 157.9 | 177.6 | 162.6 | 198.5 | 172.3 | 158.4 | 141.8 | 173.3 |
| August | 200.8 | 202.2 | 184.8 | 185.0 | 162.0 | 190.0 | 165.9 | 204.5 | 172.8 | 158.4 | 144.7 | 173.8 |
| September | 203.9 | 205.4 | 188.9 | 190.0 | 170.2 | 211.0 | 168.1 | 208.2 | 177.9 | 159.6 | 150.4 | 175.1 |
| October | 198.0 | 200.0 | 185.9 | 188.8 | 171.9 | 179.0 | 167.8 | 206.7 | 177.9 | 159.6 | 150.1 | 175.6 |
| November | 190.3 | 194.6 | 183.3 | 185.6 | 171.9 | 170.0 | 164.8 | 203.0 | 178.4 | 160.7 | 152.2 | 174.2 |
| December | 189.8 | 191.5 | 180.3 | 181.9 | 168.6 | 149.0 | 160.4 | 198.5 | 177.9 | 160.7 | 154.8 | 174.2 |
| 1929: January | 190.6 | 191.0 | 180.8 | 181.3 | 170.2 | 153.8 | 159.3 | 200.0 | 184.0 | 160.7 | 150.7 | 173.8 |
| February | 188.2 | 188.8 | 178.8 | 179.4 | 167.8 | 157.1 | 158.2 | 199.6 | 186.4 | 160.7 | 152.7 | 172.9 |
| March | 188.6 | 189.2 | 179.3 | 180.0 | 167.8 | 167.6 | 158.9 | 201.9 | 190.1 | 160.7 | 152.5 | 172.9 |
| April | 192.9 | 194.6 | 183.8 | 184.4 | 170.2 | 176.7 | 160.4 | 203.3 | 196.2 | 159.6 | 145.7 | 172.4 |
| May | 198.4 | 201.3 | 187.9 | 190.0 | 174.4 | 179.5 | 160.7 | 204.8 | 198.1 | 159.6 | 142.3 | 171.9 |
| June | 201.6 | 205.4 | 189.9 | 191.9 | 176.0 | 179.0 | 162.2 | 205.6 | 193.9 | 159.6 | 140.5 | 171.9 |
| July | 206.7 | 210.8 | 192.9 | 195.6 | 177.7 | 188.1 | 164.1 | 209.7 | 187.3 | 160.7 | 139.4 | 171.5 |
| August | 206.3 | 210.8 | 191.9 | 194.4 | 176.0 | 191.0 | 165.6 | 211.2 | 185.0 | 160.7 | 140.2 | 171.0 |

| Year and month | Lard | Eggs | Bread | Flour | Corn meal | Rice | Potatoes | Sugar | Tea | Coffee | All articles [1] |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1913 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| 1920 | 186.7 | 197.4 | 205.4 | 245.5 | 216.7 | 200.0 | 370.6 | 352.7 | 134.7 | 157.7 | 203.4 |
| 1921 | 113.9 | 147.5 | 176.8 | 175.8 | 150.0 | 109.2 | 182.4 | 145.5 | 128.1 | 121.8 | 153.3 |
| 1922 | 107.6 | 128.7 | 155.4 | 154.5 | 130.0 | 109.2 | 164.7 | 132.7 | 125.2 | 121.1 | 141.6 |
| 1923 | 112.0 | 134.8 | 155.4 | 142.4 | 136.7 | 109.2 | 170.6 | 183.6 | 127.8 | 126.5 | 146.2 |
| 1924 | 120.3 | 138.6 | 157.1 | 148.5 | 156.7 | 116.1 | 158.8 | 167.3 | 131.4 | 145.3 | 145.9 |
| 1925 | 147.5 | 151.0 | 167.9 | 184.8 | 180.0 | 127.6 | 211.8 | 130.9 | 138.8 | 172.8 | 157.4 |
| 1926 | 138.6 | 140.6 | 167.9 | 181.8 | 170.0 | 133.3 | 288.2 | 125.5 | 141.0 | 171.1 | 160.6 |
| 1927 | 122.2 | 131.0 | 166.1 | 166.7 | 173.3 | 123.0 | 223.5 | 132.7 | 142.5 | 162.1 | 155.4 |
| 1928 | 117.7 | 134.5 | 162.5 | 163.6 | 176.7 | 114.9 | 158.8 | 129.1 | 142.3 | 165.1 | 154.3 |
| 1928: January | 119.6 | 162.0 | 164.3 | 160.6 | 173.3 | 117.2 | 176.5 | 129.1 | 142.3 | 162.8 | 155.1 |
| February | 115.8 | 124.9 | 164.3 | 160.6 | 173.3 | 117.2 | 176.5 | 129.1 | 142.1 | 163.1 | 151.6 |
| March | 112.7 | 107.2 | 162.5 | 160.6 | 173.3 | 116.1 | 200.0 | 129.1 | 142.3 | 163.8 | 151.4 |
| April | 112.7 | 103.8 | 162.5 | 163.6 | 176.7 | 114.9 | 205.9 | 129.1 | 141.9 | 164.1 | 152.1 |
| May | 114.6 | 108.7 | 162.5 | 169.7 | 176.7 | 114.9 | 194.1 | 130.9 | 141.9 | 164.4 | 153.8 |
| June | 115.2 | 112.5 | 164.3 | 172.7 | 176.7 | 113.8 | 170.6 | 132.7 | 142.1 | 165.1 | 152.6 |
| July | 116.5 | 120.6 | 164.3 | 169.7 | 176.7 | 114.9 | 135.3 | 132.7 | 142.3 | 165.1 | 152.8 |
| August | 118.4 | 130.4 | 164.3 | 163.6 | 176.7 | 113.8 | 129.4 | 129.1 | 142.3 | 165.8 | 154.2 |
| September | 122.2 | 146.1 | 162.5 | 160.6 | 176.7 | 114.9 | 129.4 | 127.3 | 142.3 | 166.1 | 157.8 |
| October | 123.4 | 157.4 | 162.5 | 157.6 | 176.7 | 113.8 | 129.4 | 125.5 | 142.5 | 166.4 | 156.8 |
| November | 120.9 | 171.9 | 162.5 | 154.5 | 176.7 | 112.6 | 129.4 | 123.6 | 142.3 | 166.8 | 157.3 |
| December | 118.4 | 169.3 | 160.7 | 154.5 | 176.7 | 113.8 | 129.4 | 121.8 | 142.1 | 166.8 | 155.8 |
| 1929: January | 117.1 | 146.7 | 160.7 | 154.5 | 176.7 | 112.6 | 135.3 | 121.8 | 142.5 | 166.1 | 154.6 |
| February | 116.5 | 142.3 | 160.7 | 154.5 | 176.7 | 112.6 | 135.3 | 120.0 | 142.5 | 166.1 | 154.4 |
| March | 116.5 | 122.0 | 160.7 | 154.5 | 176.7 | 112.6 | 135.3 | 118.2 | 142.6 | 166.4 | 153.0 |
| April | 117.1 | 106.4 | 160.7 | 154.5 | 176.7 | 112.6 | 135.3 | 116.4 | 142.6 | 166.4 | 151.6 |
| May | 116.5 | 112.2 | 160.7 | 151.5 | 176.7 | 111.5 | 158.8 | 116.4 | 142.6 | 166.1 | 153.3 |
| June | 115.8 | 120.0 | 160.7 | 148.5 | 176.7 | 111.5 | 182.4 | 116.4 | 142.5 | 165.8 | 154.8 |
| July | 115.8 | 127.8 | 160.7 | 151.5 | 176.7 | 111.5 | 229.4 | 116.4 | 142.3 | 165.8 | 158.5 |
| August | 116.5 | 139.7 | 160.7 | 157.6 | 176.7 | 112.6 | 235.3 | 120.0 | 142.5 | 165.4 | 160.2 |

[1] 22 articles in 1913–1920; 43 articles in 1921–1929.

TABLE 5.—AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD IN 51 CITIES, AUGUST 15, 1928, AND JULY 15 AND AUGUST 15, 1929

[Exact comparisons of prices in different cities can not be made for some articles, particularly meats and vegetables, owing to differences in trade practices]

| Article | Atlanta, Ga. | | | Baltimore, Md. | | | Birmingham, Ala. | | | Boston, Mass. | | | Bridgeport, Conn. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Aug. 15, 1928 | 1929 | | Aug. 15, 1928 | 1929 | | Aug. 15, 1928 | 1929 | | Aug. 15, 1928 | 1929 | | Aug. 15, 1928 | 1929 | |
| | | July 15 | Aug. 15 | | July 15 | Aug. 15 | | July 15 | Aug. 15 | | July 15 | Aug. 15 | | July 15 | Aug. 15 |
| | Cts. | Cts. | Cts. | Cts. | Cts. | Cts. | Cts. | Cts. | Cts. | Cts. | Cts. | Cts. | Cts. | Cts. | Cts. |
| Sirloin steak...pound.. | 47.3 | 51.2 | 52.0 | 50.7 | 53.7 | 53.1 | 52.0 | 52.3 | 53.3 | [1]74.0 | [1]75.1 | [1]76.0 | 60.5 | 61.1 | 61.3 |
| Round steak....do.... | 42.9 | 46.6 | 46.3 | 46.5 | 49.8 | 49.4 | 44.6 | 45.7 | 45.3 | 63.4 | 64.6 | 65.4 | 54.4 | 55.2 | 56.1 |
| Rib roast.....do.... | 36.1 | 38.4 | 38.4 | 36.6 | 38.1 | 37.5 | 35.2 | 37.3 | 37.1 | 45.3 | 45.9 | 46.4 | 43.6 | 44.3 | 44.4 |
| Chuck roast....do.... | 29.5 | 31.9 | 32.4 | 30.4 | 31.6 | 31.2 | 29.6 | 30.0 | 30.7 | 34.5 | 36.3 | 36.4 | 35.8 | 37.3 | 36.9 |
| Plate beef.....do.... | 20.0 | 21.0 | 20.5 | 20.1 | 22.9 | 22.0 | 19.3 | 21.1 | 21.0 | 22.0 | 24.2 | 24.5 | 17.1 | 17.4 | 17.6 |
| Pork chops.....do.... | 37.1 | 35.5 | 39.1 | 40.5 | 41.0 | 40.1 | 35.4 | 35.7 | 37.1 | 41.9 | 42.5 | 43.5 | 41.8 | 42.5 | 42.6 |
| Bacon, sliced....do.... | 43.1 | 40.7 | 41.6 | 40.0 | 41.7 | 41.5 | 43.1 | 43.1 | 43.7 | 41.8 | 43.4 | 43.4 | 50.6 | 48.0 | 48.4 |
| Ham, sliced.....do.... | 54.2 | 57.3 | 57.3 | 56.4 | 58.4 | 57.5 | 52.6 | 54.0 | 55.7 | 59.8 | 60.2 | 60.2 | 59.8 | 59.8 | 60.3 |
| Lamb, leg of....do.... | 41.3 | 41.9 | 40.8 | 39.3 | 40.3 | 38.4 | 45.0 | 41.6 | 41.0 | 40.8 | 42.3 | 41.1 | 42.4 | 43.2 | 41.1 |
| Hens.....do.... | 33.5 | 36.9 | 36.5 | 38.6 | 42.3 | 40.7 | 30.4 | 34.7 | 33.2 | 40.6 | 42.7 | 44.3 | 40.2 | 42.9 | 42.3 |
| Salmon, canned, red ...pound.. | 35.6 | 33.6 | 34.0 | 32.0 | 28.1 | 28.2 | 36.1 | 32.6 | 32.4 | 33.1 | 30.9 | 31.3 | 33.0 | 32.2 | 32.2 |
| Milk, fresh....quart.. | 16.5 | 16.5 | 16.5 | 14.0 | 14.0 | 14.0 | 18.7 | 16.7 | 16.7 | 15.2 | 15.6 | 15.6 | 16.0 | 16.0 | 16.0 |
| Milk, evaporated ...16-oz. can.. | 13.4 | 13.2 | 12.8 | 11.1 | 10.4 | 10.4 | 11.6 | 11.9 | 11.8 | 11.6 | 11.3 | 11.1 | 11.6 | 10.8 | 10.8 |
| Butter.....pound.. | 57.2 | 56.9 | 56.8 | 59.2 | 56.7 | 56.6 | 57.2 | 55.2 | 55.4 | 57.5 | 55.2 | 55.0 | 56.8 | 53.7 | 54.4 |
| Oleomargarine (all butter substitutes) ...pound.. | 26.4 | 28.7 | 28.9 | 27.4 | 28.3 | 27.8 | 31.5 | 31.6 | 31.0 | 28.3 | 29.0 | 28.9 | 26.0 | 25.8 | 25.8 |
| Cheese.....do.... | 35.5 | 36.4 | 36.1 | 37.0 | 37.0 | 36.2 | 37.6 | 36.7 | 36.2 | 40.4 | 40.1 | 40.6 | 43.3 | 43.5 | 43.8 |
| Lard.....do.... | 18.0 | 17.9 | 18.0 | 17.2 | 16.7 | 17.2 | 18.7 | 18.3 | 18.0 | 19.0 | 18.1 | 18.4 | 17.8 | 17.3 | 17.5 |
| Vegetable lard substitute.....pound.. | 22.5 | 23.2 | 23.2 | 23.3 | 23.3 | 23.3 | 19.8 | 21.4 | 21.3 | 25.2 | 25.5 | 25.5 | 25.5 | 25.4 | 25.2 |
| Eggs, strictly fresh ...dozen.. | 43.0 | 41.0 | 46.3 | 41.0 | 42.9 | 46.0 | 42.3 | 43.0 | 45.5 | 64.9 | 62.1 | 68.1 | 63.8 | 56.9 | 63.5 |
| Bread.....pound.. | 10.8 | 10.6 | 10.6 | 9.6 | 8.5 | 8.5 | 10.0 | 9.9 | 9.9 | 8.6 | 8.7 | 8.7 | 8.8 | 8.7 | 8.8 |
| Flour.....do.... | 6.7 | 6.4 | 6.4 | 5.1 | 4.7 | 5.1 | 6.7 | 6.3 | 6.3 | 5.7 | 5.6 | 5.7 | 5.5 | 5.1 | 5.4 |
| Corn meal.....do.... | 4.3 | 4.4 | 4.4 | 4.0 | 4.1 | 4.2 | 4.3 | 4.1 | 4.2 | 6.9 | 6.6 | 6.6 | 7.5 | 7.1 | 7.1 |
| Rolled oats.....do.... | 9.1 | 9.5 | 9.7 | 8.1 | 8.1 | 8.1 | 9.6 | 9.5 | 9.5 | 8.9 | 8.8 | 8.6 | 8.7 | 8.5 | 8.5 |
| Corn flakes ...8-oz. package.. | 9.7 | 9.7 | 9.9 | 8.6 | 8.9 | 8.8 | 10.0 | 9.8 | 9.8 | 9.3 | 9.3 | 9.3 | 9.2 | 9.3 | 9.3 |
| Wheat cereal ...28-oz. package.. | 26.6 | 27.1 | 27.1 | 24.0 | 24.2 | 24.0 | 27.4 | 27.2 | 27.1 | 25.0 | 25.3 | 25.2 | 24.4 | 24.6 | 24.2 |
| Macaroni.....pound.. | 21.3 | 21.5 | 21.5 | 18.8 | 18.7 | 18.8 | 18.6 | 18.3 | 18.5 | 21.1 | 21.4 | 21.1 | 22.3 | 22.2 | 22.2 |
| Rice.....do.... | 8.9 | 9.6 | 9.6 | 8.9 | 9.1 | 9.0 | 9.4 | 8.9 | 9.0 | 11.2 | 10.5 | 10.4 | 10.2 | 10.0 | 10.6 |
| Beans, navy....do.... | 13.1 | 16.6 | 16.3 | 12.0 | 14.0 | 13.9 | 12.5 | 15.4 | 15.1 | 12.3 | 13.4 | 13.4 | 11.6 | 14.4 | 14.5 |
| Potatoes.....do.... | 3.2 | 4.4 | 4.5 | 1.8 | 3.6 | 4.1 | 3.3 | 4.3 | 4.9 | 2.2 | 3.9 | 4.5 | 2.1 | 3.8 | 4.1 |
| Onions.....do.... | 7.5 | 8.7 | 8.2 | 4.9 | 6.9 | 6.2 | 7.1 | 7.9 | 7.5 | 5.7 | 7.9 | 7.0 | 5.5 | 7.5 | 6.8 |
| Cabbage.....do.... | 4.9 | 4.6 | 6.8 | 3.7 | 4.1 | 6.2 | 5.0 | 4.9 | 6.1 | 5.4 | 5.5 | 7.0 | 4.7 | 5.4 | 6.8 |
| Beans, baked ...No. 2 can.. | 11.0 | 12.0 | 11.4 | 10.9 | 11.0 | 11.0 | 11.4 | 11.8 | 11.8 | 12.6 | 13.2 | 12.8 | 11.6 | 11.9 | 11.9 |
| Corn, canned....do.... | 17.6 | 17.9 | 17.9 | 15.2 | 17.1 | 17.0 | 16.5 | 16.6 | 16.9 | 17.4 | 17.5 | 17.8 | 19.0 | 17.7 | 17.8 |
| Peas, canned....do.... | 19.2 | 19.2 | 19.2 | 14.7 | 15.2 | 15.3 | 19.6 | 18.9 | 18.9 | 19.6 | 19.8 | 19.9 | 21.3 | 19.1 | 19.7 |
| Tomatoes, canned ...No. 2 can.. | 10.4 | 13.9 | 14.1 | 10.2 | 12.8 | 12.8 | 10.0 | 13.4 | 13.4 | 11.9 | 13.8 | 14.0 | 13.5 | 14.8 | 14.8 |
| Sugar.....pound.. | 7.8 | 6.8 | 7.2 | 6.3 | 5.5 | 5.8 | 7.4 | 6.6 | 6.8 | 7.0 | 6.2 | 6.4 | 7.0 | 6.4 | 6.5 |
| Tea.....do.... | 105.9 | 105.3 | 105.7 | 72.3 | 72.8 | 72.5 | 98.4 | 95.6 | 95.6 | 72.4 | 75.7 | 74.8 | 61.0 | 57.2 | 57.2 |
| Coffee.....do.... | 49.6 | 51.4 | 51.7 | 45.2 | 45.7 | 45.4 | 50.8 | 52.4 | 52.4 | 53.9 | 54.2 | 53.9 | 40.3 | 47.3 | 47.5 |
| Prunes.....do.... | 14.9 | 15.7 | 16.4 | 11.5 | 12.5 | 12.5 | 16.3 | 17.3 | 17.9 | 12.8 | 14.3 | 14.9 | 14.8 | 15.2 | 15 1 |
| Raisins.....do.... | 15.0 | 13.9 | 14.2 | 12.6 | 10.5 | 11.1 | 14.5 | 12.8 | 13.0 | 12.4 | 10.9 | 10.7 | 13.3 | 11.9 | 11.9 |
| Bananas.....dozen.. | 27.2 | 27.1 | 27.1 | 23.7 | 23.7 | 24.0 | 36.7 | 37.5 | 37.1 | 41.7 | 38.0 | 38.0 | 33.3 | 35.0 | 31.0 |
| Oranges.....do.... | 63.4 | 46.7 | 41.5 | 63.8 | 40.2 | 40.4 | 61.4 | 46.9 | 46.3 | 69.3 | 50.8 | 52.0 | 73.8 | 51.2 | 52.2 |

[1] The steak for which prices are here quoted is called "sirloin" in this city, but in most of the other cities included in this report it would be known as "porterhouse" steak.

TABLE 5.—AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD IN 51 CITIES, AUGUST 15, 1928, AND JULY 15 AND AUGUST 15, 1929—Continued

| Article | Buffalo, N. Y. | | | Butte, Mont. | | | Charleston, S. C. | | | Chicago, Ill. | | | Cincinnati, Ohio | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Aug. 15, 1928 | 1929 | | Aug. 15, 1928 | 1929 | | Aug. 15, 1928 | 1929 | | Aug. 15, 1928 | 1929 | | Aug. 15, 1928 | 1929 | |
| | | July 15 | Aug. 15 | | July 15 | Aug. 15 | | July 15 | Aug. 15 | | July 15 | Aug. 15 | | July 15 | Aug. 15 |
| | Cts. | Cts. | Cts. | Cts. | Cts. | Cts. | Cts. | Cts. | Cts. | Cts. | Cts. | Cts. | Cts. | Cts. | Cts. |
| Sirloin steak...pound | 52.4 | 53.7 | 53.5 | 35.6 | 39.5 | 40.7 | 38.2 | 39.2 | 38.8 | 57.9 | 55.0 | 56.3 | 47.1 | 50.2 | 49.2 |
| Round steak...do | 45.4 | 45.9 | 46.1 | 33.8 | 38.2 | 39.4 | 35.7 | 38.8 | 38.5 | 49.0 | 48.4 | 49.0 | 44.1 | 47.1 | 46.1 |
| Rib roast...do | 36.4 | 37.5 | 38.1 | 31.8 | 36.0 | 33.9 | 31.1 | 32.5 | 32.2 | 41.4 | 41.6 | 41.4 | 36.2 | 39.3 | 39.2 |
| Chuck roast...do | 30.9 | 31.6 | 32.3 | 24.1 | 28.6 | 27.0 | 25.2 | 26.6 | 26.2 | 33.5 | 34.5 | 34.2 | 28.1 | 30.1 | 29.8 |
| Plate beef...do | 18.3 | 20.3 | 20.7 | 15.9 | 18.8 | 18.3 | 17.9 | 20.8 | 20.8 | 20.2 | 20.6 | 20.5 | 20.5 | 23.6 | 22.9 |
| Pork chops...do | 43.6 | 43.5 | 44.3 | 37.5 | 36.8 | 39.3 | 34.9 | 35.2 | 35.2 | 41.1 | 39.2 | 41.5 | 38.9 | 37.6 | 40.2 |
| Bacon, sliced...do | 41.4 | 40.9 | 41.7 | 50.8 | 50.0 | 51.3 | 37.9 | 36.9 | 37.9 | 47.8 | 49.7 | 49.6 | 39.2 | 39.7 | 40.4 |
| Ham, sliced...do | 53.9 | 55.3 | 55.8 | 55.8 | 58.3 | 58.8 | 47.6 | 47.1 | 48.1 | 55.7 | 56.1 | 56.8 | 52.9 | 55.6 | 55.9 |
| Lamb, leg of...do | 37.0 | 37.6 | 36.4 | 37.8 | 40.2 | 40.2 | 42.5 | 45.0 | 43.0 | 40.7 | 41.6 | 40.3 | 40.1 | 41.5 | 40.2 |
| Hens...do | 37.9 | 40.5 | 40.6 | 35.4 | 36.2 | 36.0 | 37.2 | 41.1 | 38.9 | 38.8 | 41.8 | 41.4 | 38.2 | 41.3 | 40.0 |
| Salmon, canned, red ...pound | 31.8 | 29.4 | 29.1 | 31.6 | 32.0 | 32.0 | 32.2 | 28.5 | 29.4 | 36.2 | 33.3 | 32.9 | 34.7 | 29.4 | 28.8 |
| Milk, fresh...quart | 13.0 | 14.0 | 14.0 | 14.0 | 14.0 | 14.0 | 18.7 | 19.0 | 19.0 | 14.0 | 14.0 | 14.0 | 14.0 | 14.0 | 14.0 |
| Milk, evaporated ...16-ounce can | 10.9 | 10.5 | 10.4 | 10.6 | 10.6 | 10.6 | 11.5 | 10.6 | 10.2 | 10.9 | 10.6 | 10.6 | 11.0 | 10.9 | 10.8 |
| Butter...pound | 55.0 | 51.7 | 50.5 | 54.1 | 52.2 | 52.5 | 52.2 | 52.6 | 52.7 | 54.1 | 50.4 | 51.7 | 56.5 | 54.0 | 54.5 |
| Oleomargarine (all butter substitutes) ...pound | 27.3 | 26.3 | 26.0 | ---- | ---- | ---- | 28.7 | 28.2 | 27.9 | 26.8 | 26.6 | 26.6 | 27.8 | 27.7 | 27.9 |
| Cheese...do | 39.4 | 38.6 | 38.7 | 38.8 | 37.5 | 36.5 | 35.8 | 34.2 | 32.3 | 43.4 | 41.6 | 41.9 | 40.2 | 38.8 | 38.6 |
| Lard...do | 17.9 | 17.4 | 17.3 | 21.9 | 21.6 | 21.1 | 19.0 | 18.8 | 18.8 | 19.0 | 18.6 | 18.4 | 17.6 | 17.1 | 17.3 |
| Vegetable lard substitute...pound | 25.6 | 24.8 | 24.6 | 30.3 | 30.7 | 30.2 | 21.2 | 20.9 | 20.8 | 26.2 | 25.8 | 25.9 | 25.8 | 26.1 | 26.1 |
| Eggs, strictly fresh ...dozen | 46.8 | 45.9 | 52.3 | 47.4 | 46.8 | 51.2 | 42.4 | 42.4 | 46.6 | 45.9 | 44.8 | 48.4 | 41.9 | 40.7 | 43.6 |
| Bread...pound | 8.7 | 8.3 | 8.3 | 9.8 | 9.8 | 9.8 | 11.0 | 11.0 | 11.0 | 9.9 | 9.9 | 9.9 | 8.6 | 8.7 | 8.7 |
| Flour...do | 4.9 | 4.7 | 4.9 | 5.6 | 5.1 | 5.2 | 6.9 | 6.4 | 6.5 | 4.7 | 4.5 | 4.7 | 5.8 | 5.5 | 5.5 |
| Corn meal...do | 5.1 | 5.3 | 4.9 | 6.3 | 6.4 | 6.4 | 3.9 | 4.0 | 4.1 | 7.2 | 6.6 | 6.4 | 4.6 | 4.6 | 4.7 |
| Rolled oats...do | 8.9 | 8.5 | 8.5 | 8.3 | 8.1 | 8.2 | 9.4 | 9.4 | 9.4 | 8.5 | 8.2 | 8.2 | 8.9 | 8.9 | 8.9 |
| Corn flakes ...8-ounce package | 9.0 | 9.2 | 9.2 | 10.6 | 10.3 | 10.3 | 9.8 | 10.0 | 10.0 | 9.3 | 9.2 | 9.2 | 9.4 | 9.6 | 9.6 |
| Wheat cereal ...28-ounce package | 24.8 | 24.9 | 24.9 | 28.9 | 28.0 | 28.0 | 26.0 | 25.3 | 25.0 | 25.1 | 24.8 | 24.3 | 25.0 | 24.9 | 24.8 |
| Macaroni...pound | 21.2 | 21.4 | 21.3 | 20.0 | 19.9 | 19.9 | 18.5 | 18.6 | 19.2 | 19.0 | 18.2 | 18.2 | 18.4 | 18.2 | 18.2 |
| Rice...do | 9.7 | 9.3 | 8.9 | 11.3 | 10.6 | 10.5 | 6.5 | 6.5 | 6.7 | 10.5 | 10.3 | 10.5 | 10.0 | 9.6 | 9.6 |
| Beans, navy...do | 13.2 | 14.7 | 14.8 | 11.3 | 13.0 | 14.0 | 13.4 | 11.3 | 15.6 | 12.7 | 14.1 | 13.9 | 13.2 | 13.8 | 13.7 |
| Potatoes...do | 1.9 | 3.7 | 4.0 | 2.3 | 5.4 | 4.0 | 1.8 | 2.6 | 4.3 | 2.4 | 4.0 | 3.9 | 2.6 | 4.1 | 3.9 |
| Onions...do | 6.1 | 7.8 | 7.3 | 5.3 | 7.7 | 7.3 | 6.3 | 8.1 | 8.0 | 5.6 | 6.4 | 5.8 | 5.0 | 6.3 | 5.9 |
| Cabbage...do | 4.1 | 5.4 | 5.4 | 5.8 | 5.9 | 5.4 | 4.7 | 5.7 | 7.1 | 4.0 | 5.2 | 4.9 | 3.7 | 4.1 | 5.0 |
| Beans, baked ...No. 2 can | 10.3 | 10.3 | 10.1 | 13.8 | 13.5 | 13.6 | 10.5 | 11.3 | 11.0 | 12.9 | 12.5 | 12.8 | 10.7 | 11.6 | 11.5 |
| Corn, canned...do | 15.6 | 16.1 | 15.8 | 15.0 | 14.8 | 14.8 | 14.8 | 15.2 | 14.8 | 16.1 | 15.8 | 15.4 | 15.5 | 15.7 | 15.7 |
| Peas, canned...do | 15.4 | 15.8 | 15.6 | 14.5 | 14.2 | 14.4 | 16.2 | 16.3 | 16.3 | 17.2 | 16.4 | 16.4 | 17.6 | 16.6 | 16.6 |
| Tomatoes, canned ...No. 2 can | 13.0 | 13.9 | 14.1 | 13.5 | 12.4 | 12.4 | 9.8 | 11.8 | 11.8 | 13.6 | 14.4 | 14.3 | 11.6 | 14.3 | 14.5 |
| Sugar...pound | 6.8 | 6.1 | 6.2 | 8.5 | 7.6 | 7.6 | 6.5 | 6.3 | 6.5 | 6.9 | 6.2 | 6.4 | 7.3 | 6.6 | 6.7 |
| Tea...do | 68.1 | 68.3 | 67.7 | 83.1 | 82.6 | 82.6 | 82.8 | 84.0 | 81.2 | 69.2 | 70.0 | 68.8 | 79.7 | 79.3 | 79.3 |
| Coffee...do | 46.1 | 47.8 | 47.7 | 55.9 | 55.1 | 55.1 | 45.2 | 46.5 | 46.9 | 47.7 | 47.9 | 46.9 | 45.1 | 45.8 | 45.9 |
| Prunes...do | 13.8 | 14.4 | 14.4 | 15.0 | 14.8 | 15.0 | 11.1 | 12.4 | 12.7 | 15.4 | 17.1 | 16.8 | 13.4 | 15.4 | 15.4 |
| Raisins...do | 12.9 | 11.0 | 11.2 | 14.5 | 13.0 | 13.6 | 12.4 | 10.0 | 10.2 | 14.3 | 11.6 | 11.3 | 14.3 | 11.9 | 12.1 |
| Bananas...dozen | 36.1 | 39.0 | 39.8 | [1] 11.4 | [1] 13.5 | [1] 13.8 | 23.3 | 25.0 | 25.6 | 36.6 | 38.4 | 38.8 | 35.6 | 37.2 | 36.9 |
| Oranges...do | 63.9 | 46.9 | 50.6 | 63.0 | 49.1 | 47.7 | 63.3 | 36.0 | 38.6 | 62.2 | 47.2 | 50.1 | 63.5 | 44.9 | 46.8 |

[1] Per pound.

TABLE 5.—AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD IN 51 CITIES, AUGUST 15, 1928, AND JULY 15 AND AUGUST 15, 1929—Continued

| Article | Cleveland, Ohio | | | Columbus, Ohio | | | Dallas, Tex. | | | Denver, Colo. | | | Detroit, Mich. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Aug. 15, 1928 | 1929 | | Aug. 15, 1928 | 1929 | | Aug. 15, 1928 | 1929 | | Aug. 15, 1928 | 1929 | | Aug. 15, 1928 | 1929 | |
| | | July 15 | Aug. 15 | | July 15 | Aug. 15 | | July 15 | Aug. 15 | | July 15 | Aug. 15 | | July 15 | Aug. 15 |
| | Cts. | Cts. | Cts. | Cts. | Cts. | Cts. | Cts. | Cts. | Cts. | Cts. | Cts. | Cts. | Cts. | Cts. | Cts. |
| Sirloin steak..pound.. | 53.1 | 52.3 | 50.6 | 48.9 | 50.3 | 50.5 | 43.6 | 48.5 | 48.1 | 43.8 | 46.2 | 46.3 | 53.5 | 54.4 | 55.2 |
| Round steak....do.... | 46.3 | 46.5 | 45.2 | 44.5 | 46.3 | 46.5 | 40.6 | 46.6 | 46.4 | 39.7 | 42.3 | 42.3 | 44.4 | 46.2 | 47.0 |
| Rib roast.....do.... | 36.4 | 37.0 | 36.1 | 37.3 | 40.0 | 40.5 | 35.0 | 38.9 | 37.6 | 32.8 | 33.3 | 33.2 | 38.5 | 40.5 | 40.5 |
| Chuck roast ....do.... | 32.0 | 33.1 | 32.5 | 31.5 | 33.5 | 33.5 | 28.4 | 31.7 | 31.1 | 27.4 | 28.2 | 28.9 | 31.3 | 33.0 | 32.4 |
| Plate beef.....do.... | 19.8 | 21.5 | 21.0 | 22.3 | 24.3 | 24.2 | 22.1 | 24.7 | 24.8 | 16.0 | 18.5 | 18.5 | 20.1 | 22.0 | 21.6 |
| Pork chops.....do.... | 42.4 | 41.3 | 42.4 | 37.7 | 36.3 | 37.4 | 37.7 | 37.5 | 38.0 | 38.5 | 36.9 | 39.1 | 44.2 | 43.1 | 44.0 |
| Bacon, sliced....do.... | 44.5 | 41.8 | 43.0 | 46.4 | 44.7 | 45.5 | 43.4 | 43.2 | 42.0 | 44.7 | 42.1 | 42.4 | 46.4 | 44.7 | 45.8 |
| Ham, sliced.....do.... | 57.7 | 57.3 | 57.8 | 53.8 | 53.6 | 54.1 | 55.7 | 59.1 | 59.6 | 54.0 | 56.4 | 56.3 | 59.7 | 62.2 | 61.9 |
| Lamb, leg of....do.... | 39.8 | 39.6 | 39.3 | 45.5 | 46.0 | 46.2 | 47.0 | 46.7 | 45.3 | 38.3 | 37.8 | 37.8 | 41.2 | 41.8 | 40.8 |
| Hens.....do.... | 37.5 | 40.1 | 38.9 | 39.0 | 40.6 | 38.6 | 33.0 | 34.5 | 34.8 | 31.1 | 33.5 | 33.2 | 38.7 | 41.6 | 42.0 |
| Salmon, canned, red ....pound.. | 33.6 | 32.5 | 32.3 | 38.1 | 32.8 | 33.0 | 37.7 | 32.6 | 33.7 | 34.9 | 32.2 | 32.1 | 32.8 | 31.0 | 31.0 |
| Milk, fresh.....quart.. | 13.3 | 13.0 | 13.3 | 11.0 | 12.0 | 12.0 | 12.3 | 13.0 | 13.0 | 12.0 | 12.0 | 12.0 | 14.0 | 14.0 | 14.0 |
| Milk, evaporated .....16-ounce can.. | 11.2 | 10.9 | 10.8 | 11.2 | 11.0 | 10.9 | 13.3 | 12.9 | 12.8 | 10.4 | 10.1 | 10.0 | 10.8 | 10.6 | 10.6 |
| Butter.....pound.. | 58.8 | 53.9 | 54.7 | 55.1 | 52.3 | 52.9 | 56.9 | 55.0 | 55.0 | 49.5 | 47.6 | 48.6 | 54.9 | 53.3 | 53.7 |
| Oleomargarine (all butter substitutes) ....pound.. | 28.6 | 28.7 | 28.8 | 27.1 | 27.2 | 27.0 | 28.3 | 28.3 | 28.3 | 24.5 | 24.3 | 24.2 | 25.7 | 25.4 | 26.4 |
| Cheese.....do.... | 40.0 | 39.8 | 40.0 | 37.6 | 36.5 | 35.9 | 38.5 | 38.3 | 37.6 | 40.0 | 39.1 | 38.7 | 39.7 | 39.4 | 39.4 |
| Lard.....do.... | 20.2 | 20.0 | 20.1 | 15.9 | 15.5 | 15.5 | 21.5 | 21.1 | 21.4 | 18.6 | 18.5 | 18.5 | 18.5 | 17.8 | 18.0 |
| Vegetable lard substitute.....pound.. | 26.8 | 26.7 | 26.9 | 27.5 | 26.4 | 26.7 | 24.2 | 23.1 | 23.5 | 21.7 | 21.4 | 21.3 | 26.4 | 25.9 | 25.8 |
| Eggs, strictly fresh ....dozen.. | 49.7 | 45.8 | 47.2 | 40.1 | 38.9 | 43.6 | 38.1 | 38.8 | 43.2 | 38.7 | 37.0 | 40.6 | 46.6 | 45.2 | 48.2 |
| Bread.....pound.. | 7.8 | 7.8 | 7.8 | 7.6 | 7.7 | 7.7 | 9.3 | 9.1 | 9.0 | 8.1 | 7.6 | 7.6 | 8.2 | 8.1 | 8.2 |
| Flour.....do.... | 5.7 | 5.0 | 5.3 | 5.2 | 4.8 | 5.0 | 5.6 | 4.9 | 5.1 | 4.2 | 3.7 | 3.9 | 5.2 | 4.7 | 4.9 |
| Corn meal.....do.... | 5.9 | 5.7 | 5.8 | 4.4 | 4.2 | 4.3 | 4.8 | 4.4 | 4.6 | 4.5 | 4.6 | 4.6 | 6.1 | 6.2 | 6.4 |
| Rolled oats.....do.... | 9.2 | 8.9 | 8.9 | 9.2 | 8.9 | 9.1 | 10.2 | 10.0 | 10.0 | 7.6 | 7.6 | 7.5 | 9.1 | 9.1 | 9.0 |
| Corn flakes ...8-ounce package.. | 10.0 | 9.8 | 9.8 | 9.8 | 10.0 | 10.0 | 10.2 | 9.8 | 9.9 | 9.5 | 10.1 | 9.5 | 9.2 | 9.7 | 9.7 |
| Wheat cereal ..28-ounce package.. | 25.9 | 25.8 | 25.9 | 27.1 | 26.1 | 26.3 | 27.6 | 27.3 | 27.3 | 24.8 | 24.6 | 24.6 | 25.4 | 26.3 | 26.3 |
| Macaroni.....pound.. | 21.2 | 20.9 | 20.3 | 20.4 | 20.0 | 20.0 | 21.8 | 21.4 | 21.4 | 19.4 | 19.2 | 19.2 | 21.8 | 20.6 | 20.6 |
| Rice.....do.... | 10.3 | 10.2 | 10.5 | 11.8 | 11.2 | 11.2 | 11.9 | 11.4 | 11.4 | 9.0 | 8.9 | 8.9 | 11.1 | 11.4 | 11.2 |
| Beans, navy....do.... | 12.1 | 14.5 | 14.9 | 13.9 | 14.4 | 13.8 | 13.1 | 15.6 | 15.7 | 12.3 | 13.6 | 13.5 | 13.1 | 13.6 | 13.7 |
| Potatoes.....do.... | 2.2 | 3.9 | 4.4 | 2.1 | 3.5 | 3.6 | 4.2 | 4.7 | 5.2 | 1.6 | 4.2 | 3.5 | 1.9 | 3.7 | 3.8 |
| Onions.....do.... | 5.6 | 6.7 | 6.4 | 6.4 | 8.7 | 7.9 | 5.6 | 7.2 | 7.5 | 4.8 | 6.4 | 6.4 | 4.8 | 6.8 | 6.4 |
| Cabbage.....do.... | 4.6 | 5.4 | 6.3 | 3.9 | 4.7 | 4.4 | 5.5 | 5.5 | 5.9 | 2.3 | 4.5 | 3.9 | 4.3 | 6.1 | 5.6 |
| Beans, baked .....No. 2 can.. | 12.4 | 12.0 | 12.3 | 11.7 | 11.4 | 10.9 | 12.1 | 13.3 | 13.3 | 11.8 | 11.6 | 11.7 | 11.5 | 11.9 | 11.9 |
| Corn, canned....do.... | 17.4 | 16.5 | 16.3 | 14.8 | 13.5 | 13.6 | 18.4 | 18.0 | 17.8 | 14.1 | 14.5 | 14.3 | 15.7 | 15.6 | 15.3 |
| Peas, canned....do.... | 17.4 | 17.3 | 16.9 | 14.9 | 15.3 | 15.3 | 21.5 | 21.8 | 22.0 | 15.0 | 15.2 | 15.2 | 16.1 | 16.2 | 15.7 |
| Tomatoes, canned .....No. 2 can.. | 14.0 | 14.5 | 14.6 | 11.9 | 13.8 | 14.0 | 12.1 | 13.8 | 14.0 | 14.0 | 12.6 | 12.9 | 12.0 | 13.8 | 13.9 |
| Sugar.....pound.. | 7.6 | 6.9 | 7.2 | 7.6 | 6.9 | 7.2 | 7.6 | 7.0 | 7.1 | 7.7 | 7.1 | 7.2 | 7.3 | 6.7 | 6.8 |
| Tea.....do.... | 81.0 | 83.0 | 82.9 | 86.1 | 87.8 | 85.6 | 104.4 | 103.8 | 104.9 | 70.0 | 69.5 | 68.3 | 76.1 | 72.6 | 73.1 |
| Coffee.....do.... | 52.5 | 52.2 | 51.7 | 49.3 | 49.3 | 49.3 | 58.3 | 58.8 | 58.5 | 50.2 | 49.5 | 50.6 | 49.0 | 48.9 | 48.4 |
| Prunes.....do.... | 13.6 | 14.2 | 15.1 | 15.1 | 16.7 | 16.6 | 18.4 | 18.1 | 18.7 | 15.0 | 16.3 | 16.8 | 14.6 | 16.4 | 15.8 |
| Raisins.....do.... | 13.7 | 11.5 | 11.9 | 13.7 | 11.4 | 12.1 | 15.0 | 13.0 | 13.3 | 12.3 | 11.4 | 11.4 | 13.5 | 11.9 | 12.1 |
| Bananas.....dozen.. | [1] 9.4 | [1] 9.5 | [1] 9.6 | 33.0 | 37.5 | 36.3 | 40.0 | 41.0 | 35.0 | [1] 9.5 | [1] 10.2 | [1] 10.6 | 30.8 | 34.0 | 35.0 |
| Oranges.....do.... | 68.1 | 53.4 | 52.7 | 65.8 | 40.8 | 42.8 | 61.6 | 51.9 | 47.2 | 57.8 | 37.3 | 41.5 | 66.4 | 43.9 | 46.6 |

[1] Per pound.

TABLE 5.—AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD IN 51 CITIES, AUGUST 15, 1928, AND JULY 15 AND AUGUST 15, 1929—Continued

| Article | Fall River, Mass. | | | Houston, Tex. | | | Indianapolis, Ind. | | | Jacksonville, Fla. | | | Kansas City, Mo. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1928 | 1929 | | 1928 | 1929 | | 1928 | 1929 | | 1928 | 1929 | | 1928 | 1929 | |
| | Aug. 15, | July 15 | Aug. 15 | Aug. 15, | July 15 | Aug. 15 | Aug. 15, | July 15 | Aug. 15 | Aug. 15, | July 15 | Aug. 15 | Aug. 15, | July 15 | Aug. 15 |
| | Cts. | Cts. | Cts. | Cts. | Cts. | Cts. | Cts. | Cts. | Cts. | Cts. | Cts. | Cts. | Cts. | Cts. | Cts. |
| Sirloin steak...pound.. | [1]75.2 | [1]75.3 | [1]74.1 | 38.0 | 42.3 | 41.4 | 49.8 | 51.1 | 51.1 | 40.0 | 40.0 | 39.8 | 48.2 | 50.7 | 51.7 |
| Round steak.....do.... | 59.4 | 58.0 | 58.5 | 37.5 | 42.3 | 41.1 | 47.3 | 49.3 | 49.7 | 34.6 | 36.5 | 35.8 | 42.7 | 46.3 | 47.1 |
| Rib roast.....do.... | 41.5 | 40.1 | 40.1 | 30.0 | 31.8 | 30.5 | 36.5 | 36.3 | 35.7 | 30.5 | 32.0 | 32.4 | 33.5 | 36.2 | 36.4 |
| Chuck roast.....do.... | 31.5 | 33.4 | 33.6 | 24.6 | 25.6 | 25.9 | 32.0 | 32.9 | 33.2 | 23.3 | 26.0 | 26.3 | 27.0 | 29.4 | 29.7 |
| Plate beef.....do.... | 19.4 | 18.8 | 19.4 | 20.0 | 23.5 | 23.2 | 22.2 | 21.7 | 21.1 | 15.3 | 18.0 | 18.0 | 19.2 | 21.1 | 20.5 |
| Pork chops.....do.... | 39.5 | 40.3 | 40.5 | 34.0 | 35.3 | 33.6 | 42.9 | 38.4 | 40.5 | 31.8 | 33.0 | 34.0 | 39.0 | 37.3 | 38.5 |
| Bacon, sliced.....do.... | 41.7 | 39.3 | 38.6 | 41.0 | 40.9 | 41.5 | 43.2 | 41.2 | 41.6 | 38.3 | 38.3 | 38.5 | 44.7 | 42.7 | 43.8 |
| Ham, sliced.....do.... | 51.5 | 56.9 | 56.7 | 48.0 | 51.4 | 50.9 | 55.0 | 57.7 | 58.2 | 50.0 | 50.0 | 50.3 | 54.2 | 53.6 | 55.0 |
| Lamb, leg of.....do.... | 42.5 | 44.2 | 43.8 | 34.0 | 33.3 | 32.5 | 42.0 | 45.0 | 46.0 | 40.0 | 40.0 | 41.3 | 37.5 | 36.6 | 37.4 |
| Ham.....do.... | 45.6 | 46.7 | 47.2 | 31.9 | 39.1 | 36.6 | 40.3 | 42.6 | 43.6 | 31.3 | 36.3 | 35.1 | 32.2 | 35.6 | 35.0 |
| Salmon, canned, red .....pound.. | 36.1 | 33.0 | 33.0 | 32.2 | 29.3 | 29.6 | 33.4 | 32.0 | 32.9 | 33.6 | 30.0 | 30.2 | 35.4 | 34.5 | 34.8 |
| Milk, fresh.....quart.. | 14.7 | 15.0 | 15.0 | 15.0 | 15.0 | 15.0 | 12.0 | 12.0 | 12.0 | 20.3 | 20.3 | 20.3 | 13.0 | 13.0 | 13.0 |
| Milk, evaporated .....16-ounce can.... | 12.3 | 11.9 | 12.0 | 10.8 | 10.3 | 10.4 | 10.7 | 10.2 | 10.2 | 11.3 | 10.9 | 10.9 | 11.2 | 10.8 | 10.8 |
| Butter.....pound.. | 56.7 | 55.1 | 55.3 | 52.1 | 52.3 | 52.5 | 54.8 | 53.3 | 53.2 | 55.2 | 55.5 | 55.0 | 52.6 | 49.4 | 50.9 |
| Oleomargarine (all butter substitutes) .....pound.. | 26.0 | 26.3 | 27.1 | 25.5 | 24.9 | 25.5 | 29.5 | 28.2 | 28.5 | 30.3 | 28.7 | 28.7 | 25.3 | 25.0 | 25.0 |
| Cheese.....do.... | 41.9 | 41.3 | 40.5 | 33.9 | 32.2 | 32.4 | 41.0 | 40.8 | 40.3 | 35.8 | 34.1 | 35.0 | 37.3 | 36.5 | 37.4 |
| Lard.....do.... | 18.0 | 17.5 | 17.5 | 19.2 | 20.8 | 21.3 | 17.1 | 16.3 | 16.5 | 19.4 | 19.3 | 18.9 | 19.0 | 17.7 | 18.5 |
| Vegetable lard substitute.....pound.. | 27.1 | 26.6 | 27.1 | 15.5 | 16.6 | 16.5 | 26.6 | 26.9 | 26.9 | 21.3 | 22.1 | 22.2 | 25.8 | 25.6 | 25.9 |
| Eggs, strictly fresh .....dozen.. | 62.7 | 57.7 | 66.8 | 37.4 | 39.3 | 40.8 | 38.7 | 37.9 | 43.7 | 47.2 | 42.9 | 49.1 | 38.0 | 39.3 | 42.4 |
| Bread.....pound.. | 8.9 | 8.2 | 8.2 | 8.2 | 8.4 | 8.3 | 7.9 | 8.0 | 8.0 | 10.1 | 10.0 | 10.0 | 9.6 | 9.2 | 9.2 |
| Flour.....do.... | 5.8 | 5.5 | 5.6 | 5.2 | 4.7 | 4.9 | 5.3 | 5.1 | 5.1 | 6.5 | 5.7 | 5.7 | 5.0 | 4.7 | 5.0 |
| Corn meal.....do.... | 7.1 | 6.5 | 6.4 | 4.2 | 4.2 | 4.5 | 4.1 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 5.4 | 5.3 | 5.4 |
| Rolled oats.....do.... | 9.5 | 9.4 | 9.4 | 8.4 | 8.2 | 8.4 | 8.8 | 8.7 | 8.7 | 9.2 | 9.4 | 9.3 | 9.1 | 9.1 | 9.2 |
| Corn flakes ...8-ounce package.. | 9.8 | 9.8 | 9.7 | 8.4 | 9.1 | 9.0 | 9.3 | 9.5 | 9.5 | 9.6 | 9.8 | 9.7 | 9.7 | 9.6 | 9.7 |
| Wheat cereal ..28-ounce package.. | 25.3 | 24.4 | 24.4 | 25.1 | 25.3 | 25.3 | 25.7 | 25.3 | 25.9 | 24.0 | 25.2 | 25.2 | 26.9 | 26.8 | 27.1 |
| Macaroni.....pound.. | 22.6 | 23.8 | 23.8 | 18.2 | 18.1 | 18.2 | 19.3 | 18.3 | 18.3 | 19.6 | 19.1 | 19.3 | 20.2 | 19.6 | 20.1 |
| Rice.....do.... | 10.7 | 10.7 | 10.7 | 7.5 | 7.2 | 7.2 | 11.2 | 10.4 | 10.4 | 8.0 | 7.6 | 7.6 | 9.2 | 9.7 | 9.8 |
| Beans, navy.....do.... | 12.4 | 13.6 | 13.8 | 12.7 | 15.4 | 16.2 | 14.2 | 14.5 | 14.5 | 12.2 | 14.8 | 15.1 | 13.1 | 14.6 | 14.7 |
| Potatoes.....do.... | 1.8 | 4.1 | 4.1 | 4.0 | 4.9 | 5.1 | 2.1 | 4.0 | 4.2 | 2.9 | 4.0 | 4.9 | 1.3 | 3.4 | 3.5 |
| Onions.....do.... | 6.1 | 7.8 | 5.9 | 4.6 | 5.8 | 6.0 | 5.7 | 7.4 | 7.2 | 7.3 | 8.4 | 8.7 | 5.5 | 7.7 | 6.9 |
| Cabbage.....do.... | 4.8 | 4.5 | 6.8 | 4.9 | 6.3 | 7.0 | 3.4 | 4.5 | 4.7 | 4.8 | 5.0 | 6.9 | 2.4 | 4.4 | 6.9 |
| Beans, baked .....No. 2 can.. | 12.2 | 12.6 | 12.8 | 10.6 | 10.6 | 10.7 | 10.8 | 11.3 | 10.8 | 10.4 | 10.6 | 10.6 | 12.2 | 12.5 | 13.2 |
| Corn, canned.....do.... | 17.2 | 16.0 | 16.2 | 14.1 | 14.0 | 13.7 | 14.0 | 14.0 | 14.0 | 17.7 | 17.0 | 17.0 | 14.9 | 15.1 | 15.5 |
| Peas, canned.....do.... | 19.5 | 18.2 | 18.1 | 14.3 | 15.7 | 14.9 | 15.2 | 14.7 | 15.0 | 17.4 | 17.8 | 17.8 | 15.2 | 15.9 | 16.3 |
| Tomatoes, canned .....No. 2 can.. | 12.3 | 13.9 | 14.3 | 9.8 | 11.8 | 12.5 | 12.0 | 14.2 | 14.6 | 9.8 | 11.3 | 11.6 | 11.1 | 14.4 | 14.7 |
| Sugar.....pound.. | 7.1 | 6.1 | 6.4 | 7.0 | 6.5 | 6.6 | 7.6 | 6.9 | 7.0 | 7.2 | 6.7 | 6.7 | 7.5 | 7.0 | 7.2 |
| Tea.....do.... | 59.6 | 59.1 | 59.1 | 83.3 | 86.8 | 86.7 | 85.8 | 90.3 | 89.8 | 98.9 | 97.6 | 97.6 | 93.2 | 89.0 | 91.0 |
| Coffee.....do.... | 50.6 | 50.0 | 49.8 | 43.3 | 44.6 | 44.6 | 48.7 | 48.2 | 48.1 | 48.1 | 47.4 | 47.4 | 52.2 | 52.3 | 52.1 |
| Prunes.....do.... | 13.4 | 13.6 | 13.8 | 13.0 | 14.5 | 14.7 | 17.2 | 16.0 | 17.5 | 16.1 | 14.2 | 14.2 | 14.6 | 15.4 | 15.8 |
| Raisins.....do.... | 13.3 | 11.6 | 11.9 | 12.9 | 10.5 | 10.4 | 14.7 | 13.8 | 14.2 | 14.5 | 11.7 | 12.2 | 14.6 | 12.7 | 12.8 |
| Bananas.....dozen.. | [2]8.3 | [2]8.6 | [2]8.6 | 25.4 | 26.1 | 24.6 | 30.6 | 31.7 | 30.6 | 26.7 | 26.4 | 25.7 | [2]10.1 | [2]10.1 | [2]10.0 |
| Oranges.....do.... | 69.3 | 42.4 | 47.0 | 50.7 | 34.0 | 34.9 | 62.7 | 47.6 | 43.8 | 104.0 | 46.7 | 46.7 | 63.2 | 39.5 | 38.1 |

[1] Per pound.
[2] The steak for which prices are here quoted is called "rump" in this city, but in most of the other cities included in this report it would be known as "porterhouse" steak.

TABLE 5.—AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD IN 51 CITIES, AUGUST 15, 1928, AND JULY 15 AND AUGUST 15, 1929—Continued

| Article | Little Rock, Ark. | | | Los Angeles, Calif. | | | Louisville, Ky. | | | Manchester, N. H. | | | Memphis, Tenn. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1928 | 1929 | | 1928 | 1929 | | 1928 | 1929 | | 1928 | 1929 | | 1928 | 1929 | |
| | Aug. 15 | July 15 | Aug. 15 | Aug. 15 | July 15 | Aug. 15 | Aug. 15 | July 15 | Aug. 15 | Aug. 15 | July 15 | Aug. 15 | Aug. 15 | July 15 | Aug. 15 |
| | Cts. | Cts. | Cts. | Cts. | Cts. | Cts. | Cts. | Cts. | Cts. | Cts. | Cts. | Cts. | Cts. | Cts. | Cts. |
| Sirloin steak..pound.. | 45.0 | 49.5 | 48.3 | 42.6 | 45.7 | 46.5 | 46.9 | 50.0 | 47.7 | [1]70.4 | [1]68.2 | [1]67.3 | 48.1 | 49.0 | 48.9 |
| Round steak....do.... | 40.4 | 45.0 | 44.7 | 35.1 | 38.1 | 38.8 | 41.9 | 45.0 | 43.2 | 54.9 | 55.5 | 54.8 | 44.2 | 45.7 | 45.6 |
| Rib roast.....do.... | 34.5 | 39.2 | 37.7 | 33.9 | 35.1 | 35.3 | 33.9 | 37.5 | 34.8 | 36.2 | 36.4 | 36.0 | 33.7 | 34.8 | 35.9 |
| Chuck roast....do.... | 27.9 | 31.7 | 30.2 | 24.7 | 25.6 | 26.5 | 27.7 | 29.1 | 28.2 | 30.8 | 31.5 | 31.2 | 29.1 | 30.1 | 30.0 |
| Plate beef.....do.... | 20.5 | 23.6 | 23.6 | 16.8 | 16.6 | 16.8 | 21.3 | 23.6 | 22.8 | 22.7 | 24.7 | 25.0 | 21.8 | 22.6 | 21.8 |
| Pork chops.....do.... | 34.6 | 34.5 | 35.5 | 45.6 | 44.6 | 47.0 | 37.2 | 36.2 | 36.2 | 38.5 | 38.4 | 39.5 | 34.8 | 35.5 | 36.0 |
| Bacon, sliced....do.... | 44.3 | 45.4 | 46.4 | 52.4 | 51.7 | 53.0 | 44.6 | 45.1 | 43.7 | 38.5 | 37.4 | 37.5 | 37.0 | 36.2 | 36.3 |
| Ham, sliced.....do.... | 52.2 | 54.5 | 53.9 | 70.0 | 69.1 | 70.7 | 51.5 | 52.3 | 50.9 | 46.8 | 49.4 | 48.0 | 52.7 | 55.4 | 56.4 |
| Lamb, leg of....do.... | 42.0 | 41.4 | 39.2 | 37.5 | 38.8 | 39.3 | 38.6 | 38.3 | 37.7 | 38.9 | 40.5 | 40.5 | 38.0 | 38.5 | 38.5 |
| Ham.....do.... | 29.4 | 31.8 | 30.8 | 42.0 | 46.5 | 46.7 | 35.7 | 39.1 | 37.3 | 42.6 | 44.0 | 44.5 | 29.9 | 34.5 | 33.8 |
| Salmon, canned, red ..pound.. | 35.2 | 30.5 | 30.5 | 31.6 | 29.6 | 29.9 | 35.2 | 29.8 | 30.0 | 34.0 | 30.1 | 30.5 | 33.4 | 35.6 | 35.6 |
| Milk, fresh.....quart.. | 14.0 | 15.0 | 15.0 | 15.0 | 15.0 | 15.0 | 12.0 | 13.0 | 13.0 | 15.0 | 14.7 | 15.0 | 15.0 | 15.0 | 15.0 |
| Milk, evaporated ..16-ounce can.. | 11.9 | 11.6 | 11.6 | 9.9 | 9.9 | 10.0 | 11.8 | 11.5 | 11.3 | 12.7 | 12.0 | 11.9 | 11.4 | 11.1 | 10.9 |
| Butter.....pound.. | 54.5 | 53.9 | 53.8 | 56.0 | 54.3 | 55.1 | 56.1 | 54.0 | 53.4 | 57.0 | 54.4 | 55.0 | 54.8 | 53.4 | 53.5 |
| Oleomargarine (all butter substitutes) ..pound.. | 27.3 | 26.9 | 25.3 | 25.3 | 25.3 | 25.0 | 27.3 | 25.8 | 25.6 | 28.1 | 27.1 | 27.0 | 24.4 | 25.6 | 26.5 |
| Cheese.....do.... | 37.2 | 36.5 | 36.8 | 38.4 | 38.4 | 38.4 | 37.9 | 37.3 | 37.3 | 39.4 | 38.2 | 38.2 | 35.8 | 34.5 | 35.0 |
| Lard.....do.... | 20.8 | 19.5 | 19.7 | 20.5 | 19.5 | 19.6 | 18.4 | 17.3 | 17.9 | 18.4 | 17.7 | 17.8 | 16.9 | 15.7 | 15.9 |
| Vegetable lard substitute.....pound.. | 19.4 | 20.2 | 20.8 | 24.3 | 24.6 | 24.4 | 27.4 | 26.3 | 26.3 | 25.6 | 26.4 | 26.3 | 20.9 | 22.1 | 22.1 |
| Eggs, strictly fresh ..dozen.. | 41.7 | 38.1 | 44.5 | 45.0 | 46.9 | 50.3 | 39.0 | 39.3 | 41.7 | 59.5 | 56.3 | 62.1 | 39.8 | 39.5 | 42.5 |
| Bread.....pound.. | 9.3 | 9.6 | 9.6 | 8.9 | 8.6 | 8.6 | 9.2 | 9.4 | 9.4 | 8.7 | 8.1 | 8.1 | 9.5 | 9.3 | 9.4 |
| Flour.....do.... | 6.1 | 5.8 | 5.9 | 5.3 | 4.8 | 4.9 | 6.1 | 5.9 | 6.1 | 5.7 | 5.0 | 5.4 | 6.1 | 5.8 | 6.0 |
| Corn meal.....do.... | 4.2 | 4.2 | 4.2 | 5.8 | 5.8 | 5.7 | 4.2 | 4.1 | 4.1 | 5.3 | 5.3 | 5.3 | 3.8 | 4.1 | 4.3 |
| Rolled oats.....do.... | 10.2 | 10.1 | 10.4 | 10.1 | 10.0 | 10.0 | 8.6 | 8.5 | 8.6 | 8.9 | 8.4 | 8.4 | 8.7 | 9.0 | 9.0 |
| Corn flakes ..8-ounce package.. | 9.8 | 9.8 | 9.7 | 9.4 | 9.4 | 9.4 | 9.5 | 9.5 | 9.5 | 9.2 | 9.0 | 9.2 | 9.8 | 9.7 | 9.7 |
| Wheat cereal ..28-ounce package.. | 27.1 | 27.3 | 27.1 | 25.0 | 25.0 | 25.0 | 26.7 | 27.2 | 26.7 | 25.4 | 25.6 | 25.6 | 25.8 | 26.0 | 25.8 |
| Macaroni.....pound.. | 20.1 | 20.2 | 20.5 | 18.1 | 17.8 | 17.8 | 18.9 | 18.6 | 18.7 | 23.5 | 23.1 | 23.1 | 19.5 | 19.5 | 19.9 |
| Rice.....do.... | 7.7 | 8.2 | 8.1 | 10.1 | 9.7 | 9.6 | 11.0 | 10.3 | 10.1 | 9.0 | 8.6 | 8.7 | 8.0 | 8.4 | 8.5 |
| Beans, navy....do.... | 12.5 | 14.8 | 15.0 | 12.1 | 13.4 | 14.2 | 13.0 | 14.5 | 14.5 | 12.9 | 13.7 | 13.6 | 12.6 | 15.0 | 14.7 |
| Potatoes.....do.... | 2.3 | 2.8 | 3.5 | 2.3 | 3.4 | 3.9 | 1.6 | 3.0 | 3.6 | 1.9 | 3.9 | 4.4 | 2.7 | 4.3 | 4.7 |
| Onions.....do.... | 5.0 | 7.0 | 7.4 | 4.2 | 4.8 | 4.8 | 4.6 | 5.3 | 5.3 | 5.7 | 7.9 | 6.3 | 4.6 | 5.5 | 5.5 |
| Cabbage.....do.... | 4.4 | 5.3 | 6.8 | 3.6 | 4.0 | 4.3 | 3.5 | 4.4 | 5.8 | 4.6 | 5.5 | 4.5 | 3.6 | 4.9 | 6.0 |
| Beans, baked ..No. 2 can.. | 11.2 | 12.3 | 12.3 | 11.3 | 11.7 | 11.8 | 10.8 | 11.1 | 11.2 | 13.1 | 13.7 | 13.6 | 11.0 | 11.9 | 12.0 |
| Corn, canned...do.... | 15.8 | 16.0 | 16.8 | 15.9 | 15.9 | 15.9 | 15.3 | 15.0 | 15.0 | 16.4 | 16.4 | 16.4 | 14.2 | 14.7 | 14.7 |
| Peas, canned....do.... | 17.0 | 18.2 | 18.2 | 17.3 | 16.9 | 16.5 | 15.5 | 15.1 | 15.1 | 17.6 | 17.6 | 17.6 | 15.5 | 15.7 | 16.0 |
| Tomatoes, canned ..No. 2 can.. | 9.8 | 13.7 | 13.4 | [4]15.0 | [4]15.6 | [4]15.6 | 10.3 | 14.1 | 14.6 | 12.1 | 14.3 | 14.5 | 9.7 | 12.7 | 12.0 |
| Sugar.....pound.. | 7.6 | 7.1 | 7.3 | 6.7 | 6.0 | 6.3 | 7.3 | 7.0 | 7.2 | 7.3 | 6.7 | 6.8 | 7.0 | 6.7 | 6.7 |
| Tea.....do.... | 102.4 | 103.1 | 108.1 | 75.7 | 73.4 | 73.4 | 89.2 | 92.0 | 90.3 | 65.2 | 63.4 | 63.6 | 97.6 | 95.6 | 96.4 |
| Coffee.....do.... | 54.0 | 53.8 | 53.8 | 53.9 | 53.5 | 53.6 | 50.8 | 48.8 | 48.5 | 51.9 | 50.0 | 50.5 | 49.9 | 48.8 | 48.3 |
| Prunes.....do.... | 15.2 | 16.1 | 16.0 | 11.9 | 14.4 | 14.9 | 16.0 | 14.7 | 15.9 | 12.9 | 13.8 | 14.2 | 13.5 | 14.5 | 14.5 |
| Raisons.....do.... | 14.8 | 14.5 | 14.3 | 11.5 | 10.6 | 10.6 | 14.2 | 12.0 | 12.0 | 13.3 | 11.1 | 11.0 | 14.6 | 12.3 | 12.9 |
| Bananas.....dozen.. | [2]7.5 | [2]8.6 | [2]8.9 | [2]7.4 | [2]8.6 | [2]8.6 | [2]8.8 | [2]9.9 | [2]9.9 | [2]7.7 | [2]7.9 | [2]7.8 | [2]7.1 | [2]7.8 | [2]8.0 |
| Oranges.....do.... | 59.0 | 44.9 | 53.4 | 55.5 | 42.8 | 43.6 | 56.4 | 40.9 | 41.4 | 68.1 | 46.5 | 45.4 | 61.2 | 43.6 | 43.2 |

[1] The steak for which prices are here quoted is called "sirloin" in this city, but in most of the other cities included in this report it would be known as "porterhouse" steak.
[2] Per pound.
[4] No. 2½ can.

TABLE 5.—AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD IN 51 CITIES, AUGUST 15, 1928, AND JULY 15 AND AUGUST 15, 1929—Continued

| Article | Milwaukee, Wis. | | | Minneapolis, Minn. | | | Mobile, Ala. | | | Newark, N. J. | | | New Haven, Conn. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Aug. 15, 1928 | 1929 | | Aug. 15, 1928 | 1929 | | Aug. 15, 1928 | 1929 | | Aug. 15, 1928 | 1929 | | Aug. 15, 1928 | 1929 | |
| | | July 15 | Aug. 15 | | July 15 | Aug. 15 | | July 15 | Aug. 15 | | July 15 | Aug. 15 | | July 15 | Aug. 15 |
| | Cts. | Cts. | Cts. | Cts. | Cts. | Cts. | Cts. | Cts. | Cts. | Cts. | Cts. | Cts. | Cts. | Cts. | Cts. |
| Sirloin steak...pound | 49.0 | 50.7 | 50.1 | 44.2 | 45.4 | 44.5 | 42.2 | 46.0 | 46.0 | 58.2 | 57.4 | 56.8 | 64.8 | 64.5 | 65.5 |
| Round steak...do | 44.2 | 45.7 | 45.6 | 39.3 | 41.3 | 40.6 | 40.9 | 44.1 | 43.5 | 53.8 | 54.2 | 53.6 | 53.7 | 55.1 | 55.7 |
| Rib roast...do | 34.7 | 34.8 | 34.8 | 33.7 | 36.1 | 35.5 | 31.1 | 37.3 | 35.4 | 42.9 | 42.3 | 41.4 | 42.7 | 43.9 | 44.2 |
| Chuck roast...do | 31.1 | 33.4 | 33.0 | 28.8 | 31.4 | 30.9 | 27.2 | 29.4 | 28.1 | 33.5 | 34.1 | 33.8 | 34.7 | 36.1 | 37.4 |
| Plate beef...do | 20.0 | 20.9 | 21.1 | 17.6 | 19.7 | 19.3 | 20.9 | 23.8 | 23.1 | 19.3 | 20.0 | 19.3 | 18.9 | 19.6 | 19.0 |
| Pork chops...do | 39.7 | 39.4 | 40.5 | 38.3 | 39.2 | 39.4 | 35.6 | 36.0 | 36.9 | 42.1 | 41.3 | 42.3 | 41.4 | 40.9 | 42.4 |
| Bacon, sliced...do | 45.7 | 44.1 | 45.6 | 46.7 | 47.3 | 47.1 | 41.0 | 40.0 | 40.0 | 43.6 | 43.3 | 44.2 | 46.6 | 45.5 | 45.5 |
| Ham, sliced...do | 49.9 | 50.6 | 50.9 | 52.3 | 54.7 | 54.7 | 50.5 | 51.1 | 51.9 | 56.9 | 58.5 | 58.1 | 61.5 | 61.1 | 61.1 |
| Lamb, leg of...do | 41.2 | 42.1 | 40.9 | 37.9 | 37.7 | 36.8 | 40.0 | 43.0 | 45.0 | 40.2 | 42.9 | 40.7 | 42.0 | 45.0 | 42.7 |
| Hens...do | 33.3 | 37.4 | 36.6 | 34.3 | 35.6 | 36.3 | 32.0 | 35.0 | 34.6 | 38.3 | 40.9 | 41.2 | 42.5 | 44.4 | 44.5 |
| Salmon, canned, red ...pound | 33.4 | 33.8 | 34.3 | 36.8 | 35.3 | 35.1 | 35.6 | 29.1 | 29.3 | 32.1 | 28.8 | 29.3 | 34.8 | 31.5 | 32.1 |
| Milk, fresh...quart | 11.0 | 11.0 | 11.0 | 12.0 | 12.0 | 12.0 | 18.0 | 18.0 | 18.0 | 16.0 | 16.0 | 16.0 | 16.0 | 16.0 | 16.0 |
| Milk, evaporated ...16-ounce can | 10.8 | 10.8 | 10.7 | 11.6 | 11.5 | 11.6 | 11.2 | 10.6 | 10.4 | 10.8 | 10.5 | 10.6 | 11.8 | 11.6 | 11.4 |
| Butter...pound | 52.9 | 49.9 | 50.6 | 52.7 | 49.7 | 50.7 | 54.9 | 54.9 | 55.1 | 56.9 | 54.7 | 55.0 | 55.0 | 54.9 | 54.5 |
| Oleomargarine (all butter substitutes) ...pound | 26.0 | 26.9 | 26.4 | 25.5 | 25.5 | 25.5 | 30.2 | 28.6 | 27.5 | 29.1 | 30.2 | 30.9 | 29.3 | 29.0 | 28.9 |
| Cheese...do | 37.1 | 36.9 | 36.5 | 36.8 | 37.4 | 37.4 | 36.8 | 35.0 | 35.0 | 40.0 | 41.8 | 41.5 | 40.9 | 41.8 | 41.8 |
| Lard...do | 18.7 | 18.3 | 18.4 | 18.7 | 19.1 | 19.2 | 18.5 | 18.3 | 18.3 | 18.3 | 18.6 | 18.7 | 18.8 | 18.9 | 19.0 |
| Vegetable lard substitute...pound | 26.4 | 26.8 | 26.6 | 27.0 | 26.6 | 26.4 | 20.8 | 19.4 | 19.7 | 25.5 | 25.5 | 25.5 | 26.1 | 25.4 | 25.4 |
| Eggs, strictly fresh ...dozen | 38.9 | 38.3 | 41.5 | 38.2 | 36.8 | 39.7 | 39.2 | 38.8 | 41.3 | 52.4 | 50.8 | 57.4 | 61.4 | 58.5 | 63.7 |
| Bread...pound | 8.7 | 8.7 | 8.7 | 8.9 | 9.0 | 9.0 | 10.1 | 10.1 | 10.1 | 9.1 | 8.8 | 8.8 | 9.0 | 8.8 | 8.8 |
| Flour...do | 4.8 | 4.4 | 4.7 | 5.1 | 4.7 | 5.0 | 6.4 | 5.7 | 5.8 | 5.4 | 5.0 | 5.1 | 5.5 | 5.0 | 5.4 |
| Corn meal...do | 5.7 | 6.3 | 6.2 | 5.2 | 5.4 | 5.4 | 4.1 | 3.9 | 4.2 | 6.9 | 6.7 | 6.5 | 6.6 | 6.9 | 6.9 |
| Rolled oats...do | 8.4 | 8.1 | 8.1 | 7.8 | 7.9 | 7.9 | 8.2 | 8.3 | 8.2 | 8.0 | 8.6 | 8.8 | 9.4 | 9.2 | 9.4 |
| Corn flakes ...8-ounce package | 9.2 | 9.4 | 9.4 | 9.8 | 9.7 | 9.9 | 9.3 | 9.0 | 9.1 | 8.6 | 8.9 | 8.9 | 9.8 | 9.9 | 9.9 |
| Wheat cereal ...28-ounce package | 24.6 | 24.7 | 24.9 | 25.3 | 25.5 | 25.4 | 24.5 | 24.2 | 24.2 | 24.8 | 26.5 | 26.6 | 25.3 | 24.4 | 24.4 |
| Macaroni...pound | 17.7 | 17.6 | 17.8 | 18.2 | 17.5 | 17.9 | 21.2 | 21.1 | 21.2 | 21.4 | 21.5 | 21.0 | 22.3 | 22.0 | 22.1 |
| Rice...do | 10.1 | 10.0 | 9.9 | 9.8 | 10.1 | 10.2 | 8.8 | 7.7 | 8.4 | 9.9 | 9.3 | 9.6 | 10.2 | 10.2 | 10.2 |
| Beans, navy...do | 13.2 | 14.0 | 14.2 | 13.6 | 14.6 | 14.8 | 11.6 | 14.5 | 14.4 | 12.3 | 14.5 | 14.7 | 12.0 | 14.3 | 14.2 |
| Potatoes...do | 1.9 | 4.2 | 3.9 | 1.0 | 3.0 | 2.6 | 2.6 | 3.9 | 4.7 | 2.3 | 4.0 | 4.4 | 2.2 | 3.7 | 4.1 |
| Onions...do | 5.1 | 7.0 | 6.3 | 5.3 | 8.1 | 7.4 | 4.5 | 5.9 | 5.3 | 5.7 | 7.6 | 6.8 | 6.2 | 7.8 | 6.2 |
| Cabbage...do | 3.3 | 5.7 | 4.6 | 2.5 | 3.8 | 4.5 | 4.2 | 4.8 | 5.6 | 5.2 | 4.8 | 7.8 | 4.7 | 5.3 | 7.2 |
| Beans, baked ...No. 2 can | 11.4 | 11.4 | 11.4 | 12.2 | 12.0 | 12.1 | 10.3 | 10.8 | 10.8 | 10.6 | 10.8 | 10.9 | 11.9 | 12.3 | 12.3 |
| Corn, canned...do | 16.0 | 16.3 | 16.2 | 14.4 | 15.1 | 14.8 | 15.7 | 14.3 | 14.0 | 17.1 | 16.4 | 16.5 | 18.1 | 18.3 | 18.3 |
| Peas, canned...do | 16.0 | 15.9 | 15.9 | 14.8 | 15.3 | 15.4 | 15.9 | 15.1 | 15.6 | 17.3 | 17.1 | 17.0 | 20.2 | 20.7 | 20.7 |
| Tomatoes, canned ...No. 2 can | 13.0 | 14.6 | 14.6 | 13.3 | 14.3 | 14.3 | 9.9 | 12.2 | 12.9 | 10.5 | 12.4 | 12.4 | 13.0 | 14.8 | 14.8 |
| Sugar...pound | 7.0 | 6.2 | 6.3 | 7.2 | 6.3 | 6.6 | 7.0 | 6.1 | 6.7 | 6.6 | 6.1 | 6.3 | 7.0 | 6.4 | 6.7 |
| Tea...do | 68.4 | 69.0 | 70.5 | 62.3 | 68.1 | 68.1 | 81.0 | 80.1 | 79.7 | 59.0 | 57.3 | 57.9 | 59.5 | 59.9 | 59.9 |
| Coffee...do | 45.0 | 46.5 | 46.4 | 52.9 | 52.8 | 52.1 | 48.5 | 50.1 | 50.0 | 49.1 | 48.3 | 49.2 | 51.6 | 51.6 | 50.5 |
| Prunes...do | 13.6 | 15.1 | 15.3 | 14.0 | 14.8 | 15.5 | 14.5 | 12.9 | 13.0 | 13.1 | 14.0 | 15.1 | 13.1 | 14.8 | 15.0 |
| Raisins...do | 13.9 | 12.8 | 12.5 | 14.1 | 11.9 | 11.8 | 13.3 | 9.6 | 9.6 | 13.0 | 11.3 | 11.6 | 13.7 | 12.4 | 12.2 |
| Bananas...dozen | [1] 8.5 | [1] 9.2 | [1] 9.2 | [1] 9.3 | [1] 9.9 | [1] 10.0 | 24.3 | 20.8 | 21.0 | 37.0 | 37.5 | 37.5 | 33.5 | 33.5 | 33.3 |
| Oranges...do | 64.1 | 43.1 | 39.9 | 65.4 | 38.1 | 41.6 | 56.0 | 34.9 | 43.2 | 69.8 | 51.2 | 55.7 | 73.9 | 53.0 | 51.2 |

[1] Per pound.

TABLE 5.—AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD IN 51 CITIES, AUGUST 15, 1928, AND JULY 15 AND AUGUST 15, 1929—Continued

| Article | New Orleans, La. | | | New York, N. Y. | | | Norfolk, Va. | | | Omaha, Nebr. | | | Peoria, Ill. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1928 | 1929 | | 1928 | 1929 | | 1928 | 1929 | | 1928 | 1929 | | 1928 | 1929 | |
| | Aug. 15 | July 15 | Aug. 15 | Aug. 15 | July 15 | Aug. 15 | Aug. 15 | July 15 | Aug. 15 | Aug. 15 | July 15 | Aug. 15 | Aug. 15 | July 15 | Aug. 15 |
| | Cts. | Cts. | Cts. | Cts. | Cts. | Cts. | Cts. | Cts. | Cts. | Cts. | Cts. | Cts. | Cts. | Cts. | Cts. |
| Sirloin steak..pound.. | 43.6 | 46.8 | 46.0 | 56.0 | 56.7 | 56.1 | 48.8 | 50.0 | 50.8 | 49.5 | 48.8 | 48.1 | 42.5 | 44.1 | 43.8 |
| Round steak....do.... | 38.7 | 41.9 | 41.5 | 52.8 | 55.0 | 54.4 | 43.6 | 43.6 | 44.6 | 47.5 | 46.8 | 47.0 | 41.0 | 43.9 | 43.5 |
| Rib roast.....do.... | 36.0 | 39.4 | 39.0 | 45.3 | 44.8 | 44.3 | 38.0 | 40.0 | 40.0 | 33.4 | 34.0 | 33.7 | 33.1 | 32.2 | 32.2 |
| Chuck roast.....do.... | 26.9 | 27.5 | 27.2 | 31.6 | 32.6 | 32.0 | 29.0 | 30.0 | 30.9 | 30.7 | 31.3 | 31.0 | 27.7 | 29.1 | 29.9 |
| Plate beef.....do.... | 20.9 | 22.9 | 22.8 | 24.3 | 26.0 | 26.0 | 18.0 | 22.6 | 21.9 | 17.2 | 19.9 | 19.7 | 19.2 | 20.2 | 20.0 |
| Pork chops.....do.... | 38.4 | 38.9 | 38.9 | 43.7 | 42.9 | 43.1 | 36.1 | 36.9 | 37.7 | 37.5 | 36.5 | 36.7 | 34.0 | 34.8 | 35.6 |
| Bacon, sliced.....do.... | 43.8 | 44.1 | 45.0 | 47.0 | 46.5 | 46.3 | 42.7 | 42.4 | 41.3 | 47.4 | 45.5 | 45.6 | 45.4 | 43.6 | 44.1 |
| Ham, sliced.....do.... | 52.1 | 53.3 | 55.1 | 59.4 | 60.8 | 60.3 | 46.5 | 45.9 | 46.5 | 54.1 | 54.4 | 54.7 | 51.2 | 50.5 | 52.3 |
| Lamb, leg of.....do.... | 40.5 | 40.1 | 40.0 | 38.6 | 41.4 | 38.6 | 45.8 | 44.2 | 42.5 | 39.0 | 38.8 | 38.1 | 42.3 | 45.0 | 44.7 |
| Hams.....do.... | 35.0 | 39.5 | 38.1 | 39.2 | 41.6 | 41.4 | 35.7 | 38.9 | 37.1 | 31.8 | 34.2 | 33.4 | 32.4 | 37.6 | 37.3 |
| Salmon, canned, red ..pound.. | 36.9 | 35.1 | 34.8 | 33.2 | 31.0 | 31.0 | 36.9 | 32.6 | 32.6 | 36.0 | 33.9 | 34.3 | 33.8 | 32.7 | 33.0 |
| Milk, fresh.....quart.. | 14.0 | 14.0 | 14.0 | 16.0 | 16.0 | 16.0 | 18.0 | 18.0 | 18.0 | 11.3 | 11.3 | 11.3 | 13.0 | 13.0 | 13.0 |
| Milk, evaporated ..16-ounce can.. | 10.9 | 10.3 | 10.1 | 10.7 | 10.4 | 10.6 | 11.5 | 10.8 | 10.7 | 11.4 | 11.1 | 10.9 | 11.1 | 10.5 | 10.5 |
| Butter.....pound.. | 55.9 | 55.5 | 55.8 | 56.0 | 53.8 | 54.4 | 58.4 | 57.8 | 57.6 | 50.4 | 48.8 | 49.0 | 50.8 | 48.7 | 48.9 |
| Oleomargarine (all butter substitutes) ..pound.. | 28.4 | 28.3 | 28.3 | 27.6 | 28.1 | 28.1 | 25.0 | 26.0 | 28.1 | 26.0 | 26.0 | 26.2 | 27.6 | 27.6 | 27.5 |
| Cheese.....do.... | 38.5 | 37.0 | 36.8 | 40.5 | 40.7 | 40.9 | 35.1 | 35.1 | 34.8 | 36.1 | 35.0 | 35.3 | 37.3 | 36.4 | 36.4 |
| Lard.....do.... | 18.4 | 18.5 | 18.4 | 19.4 | 19.6 | 19.5 | 18.1 | 17.9 | 18.1 | 19.8 | 19.0 | 19.0 | 18.4 | 18.2 | 18.0 |
| Vegetable lard substitute.....pound.. | 20.2 | 19.7 | 20.1 | 25.9 | 25.9 | 26.1 | 21.2 | 21.8 | 21.8 | 25.6 | 25.6 | 26.1 | 27.4 | 27.8 | 27.8 |
| Eggs, strictly fresh ..dozen.. | 41.4 | 40.5 | 43.0 | 54.6 | 53.1 | 58.1 | 45.0 | 44.3 | 47.9 | 35.4 | 36.0 | 37.5 | 37.4 | 35.8 | 39.5 |
| Bread.....pound.. | 8.9 | 8.7 | 8.9 | 8.7 | 8.6 | 8.7 | 9.9 | 9.4 | 9.4 | 9.6 | 9.1 | 9.1 | 10.0 | 10.0 | 10.0 |
| Flour.....do.... | 6.9 | 6.5 | 6.5 | 5.3 | 5.0 | 5.3 | 5.7 | 5.2 | 5.4 | 4.3 | 4.1 | 4.3 | 5.1 | 4.6 | 4.9 |
| Corn meal.....do.... | 4.1 | 4.1 | 4.1 | 6.5 | 6.8 | 6.8 | 4.8 | 4.7 | 4.7 | 4.6 | 4.6 | 4.8 | 4.8 | 5.1 | 4.9 |
| Rolled oats.....do.... | 8.7 | 8.5 | 8.5 | 8.7 | 8.6 | 8.6 | 8.6 | 8.7 | 8.7 | 9.9 | 9.9 | 9.8 | 8.8 | 8.6 | 8.6 |
| Corn flakes ..8-ounce pkg.. | 9.5 | 9.5 | 9.5 | 8.7 | 9.0 | 9.0 | 9.7 | 9.7 | 9.6 | 10.1 | 9.8 | 9.8 | 9.6 | 9.5 | 9.5 |
| Wheat cereal ..28-ounce pkg.. | 24.7 | 24.8 | 24.8 | 24.0 | 24.1 | 24.3 | 25.3 | 24.9 | 24.8 | 28.0 | 27.4 | 27.8 | 26.3 | 25.8 | 25.7 |
| Macaroni.....pound.. | 10.6 | 10.7 | 11.3 | 20.8 | 20.5 | 20.4 | 19.0 | 19.3 | 19.2 | 21.3 | 21.4 | 21.7 | 18.9 | 18.7 | 18.7 |
| Rice.....do.... | 9.1 | 8.4 | 8.6 | 9.9 | 9.6 | 9.7 | 11.0 | 10.4 | 10.1 | 11.0 | 10.2 | 10.1 | 10.3 | 9.3 | 9.5 |
| Beans, navy.....do.... | 10.7 | 13.6 | 13.6 | 12.9 | 15.1 | 14.9 | 11.8 | 13.9 | 14.4 | 13.5 | 14.2 | 14.0 | 13.7 | 14.6 | 14.6 |
| Potatoes.....do.... | 2.9 | 4.3 | 4.5 | 2.4 | 4.1 | 4.3 | 1.9 | 3.9 | 4.2 | 1.5 | 3.0 | 2.1 | 1.7 | 2.7 | 3.4 |
| Onions.....do.... | 4.3 | 4.5 | 4.7 | 5.6 | 7.5 | 7.0 | 5.7 | 7.7 | 7.5 | 4.8 | 7.5 | 6.3 | 6.1 | 8.1 | 7.1 |
| Cabbage.....do.... | 4.1 | 4.9 | 5.4 | 4.5 | 5.2 | 7.3 | 4.1 | 4.3 | 5.9 | 2.1 | 2.6 | 3.5 | 3.2 | 4.2 | 3.4 |
| Beans, baked ..No. 2 can.. | 10.6 | 10.9 | 11.1 | 11.2 | 11.7 | 11.7 | 10.2 | 10.7 | 10.5 | 13.3 | 13.2 | 13.4 | 10.4 | 10.8 | 10.7 |
| Corn, canned.....do.... | 15.4 | 15.1 | 15.5 | 15.2 | 15.1 | 15.0 | 15.0 | 15.2 | 14.4 | 16.4 | 15.4 | 15.3 | 15.5 | 14.0 | 1.39 |
| Peas, canned.....do.... | 16.8 | 15.9 | 16.0 | 15.0 | 15.2 | 15.4 | 18.1 | 17.7 | 16.9 | 15.9 | 14.9 | 15.2 | 16.3 | 17.2 | 17.1 |
| Tomatoes, canned ..No. 2 can.. | 10.6 | 13.3 | 13.6 | 11.2 | 13.1 | 13.4 | 9.7 | 13.0 | 13.5 | 13.4 | 14.7 | 15.2 | 12.0 | 14.4 | 14.4 |
| Sugar.....pound.. | 6.5 | 5.9 | 5.9 | 6.3 | 5.7 | 6.0 | 6.9 | 6.3 | 6.5 | 7.2 | 6.5 | 6.8 | 8.0 | 6.8 | 7.0 |
| Tea.....do.... | 82.6 | 82.2 | 82.1 | 68.6 | 67.4 | 67.6 | 94.6 | 93.1 | 93.3 | 77.2 | 80.0 | 80.0 | 66.7 | 64.3 | 64.3 |
| Coffee.....do.... | 35.0 | 35.9 | 35.9 | 46.1 | 45.0 | 45.3 | 49.6 | 49.8 | 49.5 | 53.7 | 53.6 | 53.6 | 48.9 | 48.1 | 47.9 |
| Prunes.....do.... | 14.5 | 14.5 | 13.9 | 13.4 | 13.7 | 14.3 | 13.4 | 14.0 | 13.7 | 14.6 | 15.0 | 15.8 | 15.0 | 16.2 | 16.3 |
| Raisins.....do.... | 13.3 | 10.1 | 10.1 | 13.1 | 11.7 | 11.9 | 13.5 | 12.1 | 12.4 | 14.3 | 13.6 | 13.6 | 14.1 | 12.7 | 12.7 |
| Bananas.....dozen.. | 17.1 | 16.0 | 16.3 | 36.1 | 35.9 | 35.5 | 33.5 | 33.2 | 33.5 | [2] 9.6 | [2] 10.3 | [2] 10.2 | [2] 8.4 | [2] 9.4 | [2] 9.3 |
| Oranges.....do.... | 55.6 | 44.3 | 46.8 | 74.2 | 57.9 | 59.8 | 60.7 | 51.9 | 49.1 | 54.9 | 36.8 | 36.9 | 56.9 | 39.6 | 44.2 |

[2] Per pound.

TABLE 5.—AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD IN 51 CITIES, AUGUST 15, 1928, AND JULY 15 AND AUGUST 15, 1929—Continued

| Article | Philadelphia, Pa. | | | Pittsburgh, Pa. | | | Portland, Me. | | | Portland, Oreg. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Aug. 15, 1928 | 1929 | | Aug. 15, 1928 | 1929 | | Aug. 15, 1928 | 1929 | | Aug. 15, 1928 | 1929 | |
| | | July 15 | Aug. 15 | | July 15 | Aug. 15 | | July 15 | Aug. 15 | | July 15 | Aug. 15 |
| | Cts. | Cts. | Cts. | Cts. | Cts. | Cts. | Cts. | Cts. | Cts. | Cts. | Cts. | Cts. |
| Sirloin steak, pound | [1] 66.8 | [1] 69.2 | [1] 68.9 | 59.4 | 58.9 | 58.7 | [1] 73.2 | [1] 77.7 | [1] 76.8 | 35.0 | 39.4 | 38.9 |
| Round steak, do | 54.1 | 57.0 | 55.8 | 51.4 | 50.6 | 50.7 | 55.4 | 60.0 | 62.1 | 32.8 | 38.4 | 37.6 |
| Rib roast, do | 42.6 | 45.0 | 44.4 | 41.0 | 42.9 | 42.8 | 36.2 | 41.3 | 39.2 | 30.0 | 31.7 | 31.3 |
| Chuck roast, do | 35.8 | 37.3 | 36.6 | 34.9 | 35.2 | 34.9 | 27.5 | 31.7 | 30.6 | 23.5 | 27.3 | 26.3 |
| Plate beef, do | 19.7 | 20.5 | 20.0 | 20.1 | 20.3 | 21.0 | 22.7 | 27.9 | 27.8 | 18.3 | 20.9 | 20.4 |
| Pork chops, do | 44.2 | 45.2 | 46.4 | 42.6 | 42.4 | 43.1 | 39.9 | 41.2 | 40.9 | 39.1 | 38.8 | 39.7 |
| Bacon, sliced, do | 42.9 | 43.6 | 43.9 | 48.9 | 49.2 | 49.7 | 40.8 | 39.2 | 39.2 | 49.1 | 51.9 | 51.9 |
| Ham, sliced, do | 59.4 | 61.5 | 61.8 | 61.1 | 62.1 | 61.9 | 53.8 | 56.5 | 54.7 | 54.3 | 56.6 | 57.8 |
| Lamb, leg of, do | 42.0 | 44.4 | 43.4 | 42.6 | 45.1 | 44.1 | 43.4 | 44.0 | 43.2 | 36.2 | 37.8 | 35.9 |
| Hens, do | 41.4 | 43.0 | 42.7 | 44.8 | 48.4 | 48.6 | 41.8 | 44.5 | 44.4 | 33.2 | 36.7 | 37.3 |
| Salmon, canned, red, do | 31.9 | 28.1 | 28.4 | 31.8 | 29.7 | 29.8 | 34.4 | 29.9 | 30.1 | 33.3 | 32.6 | 31.7 |
| Milk, fresh, quart | 13.0 | 13.0 | 13.0 | 14.0 | 14.0 | 14.0 | 15.0 | 15.0 | 15.0 | 12.0 | 12.0 | 12.0 |
| Milk, evaporated, 16-ounce can | 11.5 | 10.9 | 10.9 | 10.5 | 10.5 | 10.4 | 12.3 | 11.7 | 11.7 | 10.0 | 10.1 | 10.1 |
| Butter, pound | 59.1 | 56.8 | 56.7 | 56.7 | 54.2 | 55.6 | 58.0 | 56.2 | 56.3 | 55.9 | 53.4 | 53.6 |
| Oleomargarine (all butter substitutes), pound | 28.5 | 28.5 | 28.4 | 28.4 | 27.8 | 27.8 | 26.6 | 27.1 | 26.9 | 25.5 | 26.2 | 26.2 |
| Cheese, do | 42.2 | 43.4 | 42.8 | 41.8 | 41.3 | 41.5 | 39.5 | 38.8 | 39.1 | 38.7 | 38.3 | 38.3 |
| Lard, do | 18.1 | 17.9 | 18.1 | 18.5 | 18.0 | 18.0 | 18.3 | 17.4 | 17.5 | 19.9 | 19.6 | 19.8 |
| Vegetable lard substitute, do | 24.7 | 25.1 | 25.1 | 27.4 | 26.9 | 27.3 | 26.2 | 25.8 | 25.8 | 27.8 | 28.3 | 28.4 |
| Eggs, strictly fresh, dozen | 48.2 | 47.2 | 51.1 | 47.0 | 47.5 | 50.5 | 62.2 | 59.4 | 66.3 | 38.5 | 41.4 | 43.5 |
| Bread, pound | 9.1 | 8.2 | 8.2 | 9.1 | 8.9 | 8.9 | 10.1 | 9.0 | 8.9 | 9.2 | 9.3 | 9.3 |
| Flour, do | 5.3 | 4.8 | 4.9 | 5.2 | 4.6 | 5.1 | 5.5 | 5.1 | 5.5 | 4.9 | 4.7 | 4.8 |
| Corn meal, do | 5.3 | 5.2 | 5.2 | 6.0 | 6.3 | 6.3 | 5.2 | 5.3 | 5.3 | 6.0 | 5.8 | 5.8 |
| Rolled oats, do | 8.5 | 8.2 | 8.2 | 9.1 | 9.0 | 9.1 | 8.0 | 7.7 | 7.6 | 10.5 | 10.1 | 10.5 |
| Corn flakes, 8-ounce package | 8.9 | 8.7 | 8.6 | 9.7 | 9.6 | 9.7 | 9.5 | 9.7 | 9.6 | 9.4 | 9.6 | 9.6 |
| Wheat cereal, 28-ounce package | 25.2 | 24.6 | 24.6 | 24.7 | 24.6 | 24.9 | 25.6 | 25.8 | 25.8 | 27.0 | 27.0 | 26.8 |
| Macaroni, pound | 20.7 | 20.4 | 20.3 | 22.8 | 22.7 | 22.9 | 23.2 | 23.0 | 23.1 | 18.5 | 18.5 | 18.1 |
| Rice, do | 10.4 | 9.9 | 10.1 | 10.8 | 11.2 | 11.1 | 11.4 | 11.1 | 11.3 | 9.6 | 10.1 | 9.9 |
| Beans, navy, do | 11.1 | 15.0 | 14.9 | 12.5 | 14.9 | 14.3 | 12.6 | 13.7 | 14.2 | 12.8 | 14.9 | 15.5 |
| Potatoes, do | 2.4 | 4.1 | 4.6 | 2.0 | 3.7 | 4.0 | 2.1 | 4.1 | 4.1 | 2.3 | 4.0 | 3.7 |
| Onions, do | 4.5 | 6.0 | 5.9 | 6.1 | 7.6 | 7.3 | 5.3 | 7.4 | 6.0 | 3.8 | 4.7 | 4.3 |
| Cabbage, do | 4.8 | 4.3 | 7.6 | 4.2 | 5.3 | 6.5 | 4.6 | 5.2 | 5.4 | 4.2 | 3.6 | 3.3 |
| Beans, baked, No. 2 can | 11.1 | 11.1 | 10.9 | 12.8 | 13.1 | 13.1 | 15.2 | 15.5 | 15.7 | 11.8 | 13.5 | 13.5 |
| Corn, canned, do | 14.8 | 14.8 | 14.8 | 16.0 | 16.0 | 16.0 | 14.2 | 14.4 | 14.4 | 16.9 | 18.3 | 18.3 |
| Peas, canned, do | 15.6 | 15.1 | 15.1 | 17.0 | 16.7 | 16.7 | 17.4 | 18.2 | 18.0 | 17.1 | 17.3 | 17.8 |
| Tomatoes, canned, do | 11.6 | 14.0 | 13.8 | 11.9 | 14.7 | 14.9 | 11.8 | 12.8 | 13.1 | [4] 15.3 | [4] 16.1 | [4] 16.3 |
| Sugar, pound | 6.5 | 5.6 | 5.9 | 7.2 | 6.7 | 6.7 | 7.0 | 6.3 | 6.4 | 6.9 | 6.7 | 6.6 |
| Tea, do | 70.0 | 72.0 | 72.0 | 81.0 | 82.5 | 83.0 | 62.2 | 61.5 | 61.5 | 79.9 | 77.4 | 77.4 |
| Coffee, do | 43.1 | 43.7 | 44.0 | 48.9 | 49.5 | 49.2 | 53.2 | 52.7 | 52.8 | 53.3 | 53.0 | 52.9 |
| Prunes, do | 12.8 | 13.2 | 13.1 | 14.0 | 14.6 | 15.0 | 12.2 | 13.8 | 13.5 | 11.5 | 14.4 | 14.6 |
| Raisins, do | 13.0 | 10.9 | 11.0 | 13.4 | 11.7 | 12.0 | 12.3 | 10.7 | 10.8 | 13.2 | 11.5 | 11.5 |
| Bananas, dozen | 28.7 | 29.1 | 29.2 | 33.6 | 36.1 | 35.4 | [2] 10.5 | [2] 10.4 | [2] 10.3 | [2] 9.2 | [2] 10.2 | [2] 10.2 |
| Oranges, do | 68.7 | 43.4 | 47.7 | 65.4 | 48.3 | 47.9 | 71.5 | 52.8 | 55.1 | 60.8 | 30.2 | 35.0 |

[1] The steak for which prices are here quoted is called "sirloin" in this city, but in most other cities included in this report it would be known as "porterhouse" steak.
[2] Per pound.
[4] No. 2½ can.

TABLE 5.—AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD IN 51 CITIES, AUGUST 15, 1928, AND JULY 15 AND AUGUST 15, 1929—Continued

| Article | Providence, R. I. | | | Richmond, Va. | | | Rochester, N. Y. | | | St. Louis, Mo. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1928 | 1929 | | 1928 | 1929 | | 1928 | 1929 | | 1928 | 1929 | |
| | Aug. 15, | July 15 | Aug. 15 | Aug. 15, | July 15 | Aug. 15 | Aug. 15, | July 15 | Aug. 15 | Aug. 15, | July 15 | Aug. 15 |
| | Cts. | Cts. | Cts. | Cts. | Cts. | Cts. | Cts. | Cts. | Cts. | Cts. | Cts. | Cts. |
| Sirloin steak, pound | [1]80.8 | [1]82.5 | [1]82.5 | 48.8 | 51.3 | 50.7 | 52.0 | 52.2 | 52.0 | 48.6 | 49.6 | 49.3 |
| Round steak, do | 58.6 | 60.4 | 61.1 | 43.2 | 45.4 | 45.5 | 44.0 | 45.5 | 45.5 | 46.8 | 48.4 | 48.5 |
| Rib roast, do | 43.7 | 46.2 | 46.5 | 35.6 | 38.1 | 38.3 | 36.6 | 36.9 | 37.9 | 36.6 | 38.4 | 38.3 |
| Chuck roast, do | 35.2 | 37.6 | 36.7 | 29.3 | 29.4 | 30.4 | 31.5 | 32.5 | 32.7 | 29.2 | 31.9 | 31.1 |
| Plate beef, do | 24.0 | 28.0 | 28.6 | 20.4 | 23.7 | 22.4 | 18.1 | 20.5 | 20.3 | 19.7 | 22.2 | 21.6 |
| Pork chops, do | 44.3 | 42.2 | 45.1 | 39.3 | 39.0 | 39.3 | 44.3 | 43.5 | 43.7 | 39.0 | 37.2 | 38.1 |
| Bacon, sliced, do | 41.9 | 41.7 | 41.7 | 40.3 | 38.5 | 40.3 | 39.4 | 38.8 | 39.1 | 42.9 | 42.2 | 42.9 |
| Ham, sliced, do | 56.6 | 57.5 | 58.8 | 45.1 | 45.6 | 45.8 | 55.1 | 54.6 | 56.2 | 53.9 | 55.8 | 57.2 |
| Lamb, leg of, do | 41.0 | 43.6 | 41.8 | 45.3 | 46.2 | 44.9 | 39.5 | 40.9 | 39.9 | 37.9 | 39.9 | 39.2 |
| Ham, do | 41.8 | 44.0 | 45.2 | 34.0 | 39.4 | 36.8 | 40.0 | 42.3 | 42.3 | 34.1 | 40.2 | 37.9 |
| Salmon, canned, red, do | 32.9 | 30.2 | 30.6 | 35.3 | 31.0 | 31.8 | 35.2 | 30.9 | 30.4 | 32.5 | 31.9 | 31.9 |
| Milk, fresh, quart | 15.7 | 15.7 | 15.7 | 14.0 | 14.0 | 14.0 | 13.0 | 13.5 | 13.5 | 13.0 | 13.0 | 13.0 |
| Milk, evaporated, 16-ounce can | 11.3 | 11.2 | 11.2 | 12.2 | 12.0 | 11.9 | 11.2 | 11.1 | 10.9 | 10.3 | 10.0 | 9.8 |
| Butter, pound | 55.7 | 54.9 | 54.5 | 59.7 | 57.1 | 56.5 | 54.9 | 53.2 | 54.1 | 57.0 | 54.6 | 54.9 |
| Oleomargarine (all butter substitutes), pound | 26.6 | 26.6 | 26.2 | 30.0 | 29.8 | 29.7 | 28.4 | 28.0 | 28.0 | 26.9 | 26.0 | 25.5 |
| Cheese, do | 39.3 | 39.0 | 38.4 | 37.1 | 35.1 | 36.8 | 39.1 | 39.3 | 38.8 | 37.4 | 36.1 | 36.0 |
| Lard, do | 17.8 | 17.3 | 17.6 | 17.6 | 17.5 | 17.6 | 17.3 | 16.8 | 16.9 | 15.5 | 15.0 | 15.2 |
| Vegetable lard substitute, do | 26.6 | 26.3 | 26.5 | 25.8 | 25.4 | 25.2 | 26.3 | 25.6 | 26.0 | 25.3 | 25.2 | 25.1 |
| Eggs, strictly fresh, dozen | 61.4 | 61.6 | 66.0 | 39.4 | 40.7 | 44.9 | 45.5 | 45.0 | 50.0 | 40.0 | 38.9 | 42.4 |
| Bread, pound | 9.0 | 9.0 | 9.0 | 8.9 | 8.9 | 8.8 | 9.0 | 8.6 | 8.6 | 9.5 | 9.2 | 9.2 |
| Flour, do | 5.6 | 5.4 | 5.6 | 5.6 | 4.8 | 5.5 | 5.5 | 4.9 | 5.3 | 5.2 | 4.7 | 4.9 |
| Corn meal, do | 5.1 | 5.1 | 5.1 | 4.9 | 4.8 | 4.8 | 6.4 | 5.7 | 5.7 | 4.3 | 4.7 | 4.7 |
| Rolled oats, do | 9.0 | 9.0 | 9.0 | 8.5 | 8.7 | 8.7 | 9.2 | 8.6 | 8.6 | 8.1 | 8.0 | 8.0 |
| Corn flakes, 8-ounce package | 9.5 | 9.5 | 9.4 | 9.5 | 9.7 | 9.4 | 9.1 | 9.3 | 9.3 | 8.8 | 9.1 | 9.2 |
| Wheat cereal, 28-ounce package | 24.8 | 24.8 | 24.8 | 25.9 | 25.8 | 25.8 | 25.6 | 25.0 | 25.0 | 24.7 | 24.2 | 24.2 |
| Macaroni, pound | 22.8 | 22.8 | 22.8 | 20.0 | 20.1 | 20.6 | 20.6 | 18.9 | 18.7 | 19.5 | 19.8 | 19.7 |
| Rice, do | 10.1 | 9.6 | 9.6 | 11.0 | 11.0 | 11.0 | 9.6 | 8.8 | 9.0 | 9.9 | 10.0 | 10.3 |
| Beans, navy, do | 12.9 | 13.6 | 13.8 | 13.1 | 14.7 | 14.9 | 13.1 | 14.4 | 14.2 | 12.5 | 13.9 | 14.1 |
| Potatoes, do | 2.0 | 3.7 | 3.9 | 2.4 | 3.2 | 3.1 | 1.9 | 3.6 | 4.0 | 1.7 | 4.5 | 3.9 |
| Onions, do | 5.2 | 7.3 | 5.8 | 5.5 | 7.8 | 6.7 | 5.0 | 7.1 | 6.4 | 5.3 | 6.9 | 6.8 |
| Cabbage, do | 4.6 | 4.2 | 7.2 | 5.0 | 2.9 | 5.8 | 3.9 | 6.8 | 4.5 | 2.7 | 4.4 | 6.1 |
| Beans, baked, No. 2 can | 11.1 | 11.5 | 11.8 | 10.5 | 11.4 | 11.4 | 10.2 | 10.9 | 10.8 | 10.8 | 10.5 | 10.6 |
| Corn, canned, do | 17.3 | 16.6 | 16.8 | 15.3 | 15.6 | 15.1 | 16.4 | 15.8 | 15.9 | 15.3 | 15.1 | 15.0 |
| Peas, canned, do | 18.0 | 17.4 | 17.8 | 17.6 | 17.5 | 17.9 | 17.4 | 17.1 | 17.1 | 14.6 | 15.1 | 15.0 |
| Tomatoes, canned, do | 13.0 | 13.6 | 13.7 | 10.6 | 14.4 | 15.0 | 13.8 | 16.1 | 15.9 | 10.7 | 13.8 | 13.4 |
| Sugar, pound | 6.8 | 6.0 | 6.4 | 7.0 | 6.1 | 6.3 | 6.6 | 5.9 | 6.0 | 7.1 | 6.5 | 6.7 |
| Tea, do | 60.4 | 59.8 | 59.8 | 90.6 | 95.0 | 94.5 | 70.9 | 67.6 | 67.6 | 74.9 | 73.6 | 73.8 |
| Coffee, do | 51.3 | 52.3 | 52.0 | 47.6 | 47.1 | 47.6 | 48.7 | 47.5 | 47.5 | 46.9 | 47.3 | 47.1 |
| Prunes, do | 13.3 | 13.6 | 14.3 | 14.2 | 14.2 | 14.2 | 14.1 | 14.7 | 14.1 | 15.3 | 15.0 | 16.1 |
| Raisins, do | 13.5 | 11.7 | 11.9 | 13.3 | 10.8 | 10.7 | 14.0 | 12.1 | 12.1 | 13.6 | 11.2 | 11.4 |
| Bananas, dozen | 30.7 | 32.1 | 32.1 | 36.4 | 32.5 | 33.1 | 35.0 | 26.3 | 28.8 | 30.7 | 32.5 | 31.8 |
| Oranges, do | 75.7 | 55.7 | 56.3 | 71.3 | 41.2 | 45.6 | 67.1 | 44.4 | 46.7 | 56.5 | 46.5 | 46.4 |

[1] The steak for which prices are here quoted is called "sirloin" in this city, but in most of the other cities included in this report it would be known as "porterhouse" steak.

TABLE 5.—AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD IN 51 CITIES, AUGUST 15, 1928, AND JULY 15 AND AUGUST 15, 1929—Continued

| Article | St. Paul, Minn. | | | Salt Lake City, Utah | | | San Francisco, Calif. | | | Savannah, Ga. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Aug. 15, 1928 | 1929 | | Aug. 15, 1928 | 1929 | | Aug. 15, 1928 | 1929 | | Aug. 15, 1928 | 1929 | |
| | | July 15 | Aug. 15 | | July 15 | Aug. 15 | | July 15 | Aug. 15 | | July 15 | Aug. 15 |
| | Cts. | Cts. | Cts. | Cts. | Cts. | Cts. | Cts. | Cts. | Cts. | Cts. | Cts. | Cts. |
| Sirloin steak, pound | 46.6 | 45.8 | 45.9 | 37.8 | 41.2 | 40.8 | 38.1 | 41.1 | 41.0 | 41.1 | 44.5 | 45.0 |
| Round steak, do | 38.8 | 41.2 | 40.1 | 36.9 | 39.2 | 39.2 | 35.5 | 38.9 | 39.0 | 35.0 | 40.0 | 38.9 |
| Rib roast, do | 35.6 | 36.6 | 36.9 | 30.2 | 33.2 | 33.3 | 33.7 | 36.0 | 35.9 | 31.1 | 35.7 | 35.8 |
| Chuck roast, do | 29.9 | 31.0 | 30.4 | 24.5 | 27.5 | 27.2 | 22.9 | 25.2 | 25.2 | 23.3 | 28.0 | 28.3 |
| Plate beef, do | 17.9 | 19.1 | 19.0 | 17.2 | 20.4 | 20.4 | 18.3 | 19.7 | 19.9 | 19.8 | 22.4 | 22.5 |
| Pork chops, do | 37.2 | 36.0 | 37.3 | 38.8 | 39.7 | 40.0 | 42.7 | 42.1 | 43.9 | 30.9 | 32.3 | 33.9 |
| Bacon, sliced, do | 44.7 | 44.5 | 44.5 | 45.2 | 45.4 | 45.2 | 55.5 | 55.6 | 56.3 | 38.2 | 39.5 | 39.9 |
| Ham, sliced, do | 50.4 | 50.3 | 51.5 | 55.4 | 59.2 | 58.8 | 62.8 | 63.5 | 64.6 | 42.5 | 45.5 | 46.5 |
| Lamb, leg of, do | 35.4 | 33.9 | 34.2 | 38.2 | 39.8 | 39.7 | 38.6 | 40.5 | 40.5 | 38.8 | 37.8 | 37.8 |
| Ham, do | 30.8 | 34.4 | 34.1 | 33.3 | 35.0 | 35.3 | 40.7 | 44.1 | 44.8 | 30.3 | 32.5 | 31.9 |
| Salmon, canned, red, do | 38.0 | 35.8 | 36.2 | 33.7 | 33.4 | 33.2 | 30.3 | 28.4 | 28.7 | 36.0 | 33.0 | 33.2 |
| Milk, fresh, quart | 12.0 | 12.0 | 12.0 | 10.0 | 10.0 | 10.0 | 14.0 | 14.0 | 14.0 | 17.0 | 17.5 | 17.5 |
| Milk, evaporated, 16-ounce can | 11.7 | 11.5 | 11.6 | 10.1 | 9.9 | 9.9 | 10.0 | 9.9 | 9.9 | 11.2 | 10.7 | 10.7 |
| Butter, pound | 51.1 | 48.3 | 49.4 | 52.1 | 50.5 | 50.4 | 55.7 | 54.7 | 54.9 | 56.1 | 54.6 | 53.9 |
| Oleomargarine (all butter substitutes), pound | 24.5 | 24.2 | 24.0 | 25.8 | 28.8 | 29.0 | 25.3 | 24.9 | 24.9 | 30.7 | 30.2 | 29.9 |
| Cheese, do | 36.5 | 35.5 | 35.5 | 30.9 | 29.6 | 29.9 | 40.2 | 40.2 | 40.0 | 35.2 | 34.9 | 34.1 |
| Lard, do | 18.8 | 18.7 | 18.9 | 20.1 | 19.7 | 19.7 | 22.6 | 22.7 | 22.7 | 17.4 | 18.6 | 18.6 |
| Vegetable lard substitute, do | 28.0 | 27.0 | 27.3 | 29.0 | 29.5 | 29.5 | 27.5 | 27.8 | 27.8 | 16.6 | 17.2 | 17.0 |
| Eggs, strictly fresh, dozen | 38.2 | 37.1 | 39.6 | 37.3 | 38.2 | 41.4 | 41.0 | 42.2 | 47.7 | 44.0 | 41.3 | 47.7 |
| Bread, pound | 9.3 | 9.3 | 9.3 | 9.7 | 9.7 | 9.7 | 9.5 | 9.3 | 9.3 | 10.6 | 10.7 | 10.7 |
| Flour, do | 5.1 | 4.8 | 5.1 | 4.1 | 3.6 | 3.7 | 5.6 | 5.1 | 5.2 | 6.5 | 6.4 | 6.4 |
| Corn meal, do | 5.1 | 5.3 | 5.3 | 5.6 | 5.9 | 5.9 | 6.8 | 7.1 | 7.0 | 3.7 | 3.7 | 3.7 |
| Rolled oats, do | 10.1 | 10.1 | 9.9 | 8.5 | 8.5 | 8.4 | 10.1 | 9.8 | 9.9 | 8.6 | 8.9 | 8.5 |
| Corn flakes, 8-ounce package | 10.3 | 10.3 | 10.2 | 9.9 | 10.2 | 10.2 | 9.6 | 9.6 | 9.6 | 9.5 | 9.7 | 9.7 |
| Wheat cereal, 28-ounce package | 26.3 | 25.8 | 25.8 | 25.1 | 25.1 | 25.1 | 25.4 | 25.2 | 25.2 | 24.3 | 24.0 | 24.0 |
| Macaroni, pound | 18.4 | 18.5 | 18.5 | 19.9 | 19.5 | 19.9 | 16.1 | 15.9 | 15.9 | 17.7 | 17.7 | 17.4 |
| Rice, do | 10.4 | 10.7 | 10.8 | 8.7 | 8.6 | 8.8 | 10.0 | 9.7 | 9.6 | 9.1 | 9.2 | 9.3 |
| Beans, navy, do | 13.5 | 14.7 | 14.8 | 11.3 | 12.6 | 12.6 | 12.0 | 13.4 | 14.1 | 12.5 | 14.8 | 14.8 |
| Potatoes, do | 1.0 | 2.6 | 2.5 | 1.5 | 4.6 | 3.2 | 2.7 | 4.2 | 4.4 | 3.2 | 3.7 | 4.1 |
| Onions, do | 5.3 | 6.8 | 6.0 | 5.0 | 7.4 | 6.4 | 3.8 | 4.3 | 4.3 | 6.4 | 7.5 | 7.7 |
| Cabbage, do | 3.0 | 4.0 | 4.8 | 2.8 | 4.8 | 3.8 | ---- | ---- | ---- | 5.0 | 4.4 | 5.8 |
| Beans, baked, No. 2 can | 13.8 | 13.9 | 14.0 | 12.1 | 12.7 | 12.5 | 12.8 | 13.0 | 12.7 | 11.8 | 10.8 | 11.6 |
| Corn, canned, do | 14.7 | 14.9 | 15.1 | 14.4 | 14.3 | 14.0 | 17.2 | 17.5 | 17.5 | 15.3 | 15.0 | 15.0 |
| Peas, canned, do | 14.9 | 14.8 | 14.9 | 15.2 | 15.1 | 14.8 | 18.0 | 17.8 | 17.9 | 16.0 | 16.2 | 16.5 |
| Tomatoes, canned, do | 14.0 | 14.7 | 15.0 | 13.8 | 14.1 | 14.3 | [4]14.4 | [4]15.9 | [4]15.9 | 9.6 | 11.8 | 11.2 |
| Sugar, pound | 7.2 | 6.7 | 6.9 | 7.5 | 6.8 | 7.0 | 6.6 | 6.1 | 6.5 | 6.8 | 6.1 | 6.4 |
| Tea, do | 67.0 | 72.7 | 72.7 | 84.6 | 85.0 | 84.7 | 71.7 | 73.3 | 73.6 | 76.2 | 81.8 | 81.6 |
| Coffee, do | 53.6 | 53.3 | 53.3 | 54.0 | 54.9 | 54.9 | 54.5 | 53.5 | 53.4 | 45.7 | 45.6 | 46.1 |
| Prunes, do | 13.2 | 14.8 | 15.7 | 12.9 | 13.6 | 13.9 | 11.5 | 12.5 | 12.8 | 12.5 | 13.8 | 14.8 |
| Raisins, do | 14.5 | 13.5 | 13.9 | 13.1 | 11.6 | 11.7 | 11.6 | 10.6 | 10.5 | 13.1 | 11.7 | 11.5 |
| Bananas, dozen | [3]9.9 | [3]10.2 | [3]10.1 | [3]11.9 | [3]11.1 | [3]11.3 | 25.8 | 29.1 | 28.6 | 23.9 | 29.5 | 28.8 |
| Oranges, do | 65.4 | 46.0 | 44.3 | 58.8 | 35.4 | 36.2 | 57.6 | 42.4 | 42.7 | 63.2 | 42.8 | 43.0 |

[3] Per pound.

[4] No. 2½ can.

TABLE 5.—AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD IN 51 CITIES, AUGUST 15, 1928, AND JULY 15 AND AUGUST 15, 1929—Continued

| Article | Scranton, Pa. | | | Seattle, Wash. | | | Springfield, Ill. | | | Washington, D. C. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Aug. 15, 1928 | 1929 | | Aug. 15, 1928 | 1929 | | Aug. 15, 1928 | 1929 | | Aug. 15, 1928 | 1929 | |
| | | July 15 | Aug. 15 | | July 15 | Aug. 15 | | July 15 | Aug. 15 | | July 15 | Aug. 15 |
| | Cts. | Cts. | Cts. | Cts. | Cts. | Cts. | Cts. | Cts. | Cts. | Cts. | Cts. | Cts. |
| Sirloin steak, pound | 63.9 | 64.0 | 65.6 | 40.9 | 45.2 | 45.4 | 46.5 | 47.0 | 46.2 | 58.8 | 59.7 | 59.2 |
| Round steak, do | 53.9 | 54.8 | 56.3 | 37.0 | 40.5 | 40.0 | 46.5 | 47.2 | 46.6 | 52.4 | 54.3 | 53.8 |
| Rib roast, do | 44.3 | 44.2 | 44.4 | 32.7 | 35.4 | 35.3 | 32.7 | 35.6 | 35.6 | 40.4 | 40.9 | 41.1 |
| Chuck roast, do | 34.9 | 36.7 | 37.2 | 25.3 | 28.2 | 27.9 | 30.6 | 31.7 | 31.3 | 33.0 | 35.2 | 34.5 |
| Plate beef, do | 18.1 | 20.4 | 20.8 | 19.5 | 21.5 | 21.2 | 20.0 | 22.5 | 22.0 | 19.2 | 20.8 | 20.8 |
| Pork chops, do | 42.7 | 44.5 | 45.5 | 44.5 | 41.8 | 42.6 | 34.8 | 34.4 | 35.0 | 45.3 | 43.6 | 43.4 |
| Bacon, sliced, do | 48.5 | 46.9 | 48.1 | 56.0 | 55.0 | 55.4 | 44.8 | 44.5 | 43.6 | 43.8 | 43.5 | 44.4 |
| Ham, sliced, do | 60.8 | 62.5 | 62.9 | 61.1 | 60.2 | 61.1 | 52.9 | 54.1 | 55.0 | 59.7 | 60.2 | 60.0 |
| Lamb, leg of, do | 48.5 | 48.7 | 48.3 | 38.3 | 39.0 | 38.3 | 42.0 | 44.8 | 43.5 | 41.8 | 43.3 | 42.4 |
| Hens, do | 44.0 | 46.4 | 47.2 | 35.1 | 36.8 | 37.2 | 33.9 | 35.3 | 35.3 | 40.8 | 46.1 | 43.1 |
| Salmon, canned, red, do | 35.0 | 32.5 | 33.1 | 35.5 | 32.9 | 32.7 | 37.8 | 34.2 | 34.0 | 34.2 | 29.9 | 30.4 |
| Milk, fresh, quart | 13.0 | 13.0 | 13.0 | 12.0 | 12.0 | 12.0 | 14.4 | 14.4 | 14.4 | 15.0 | 14.8 | 14.8 |
| Milk, evaporated, 16-ounce can | 11.9 | 11.4 | 11.5 | 10.2 | 10.2 | 10.1 | 11.8 | 11.3 | 11.2 | 12.0 | 11.6 | 11.4 |
| Butter, pound | 57.3 | 54.9 | 54.8 | 55.9 | 54.1 | 54.6 | 53.7 | 50.8 | 51.6 | 58.7 | 56.0 | 56.4 |
| Oleomargarine (all butter substitutes), pound | 25.8 | 27.8 | 27.8 | 25.0 | 25.0 | 25.0 | 28.4 | 28.6 | 28.0 | 27.2 | 26.5 | 26.7 |
| Cheese, do | 39.2 | 38.4 | 38.2 | 35.2 | 35.7 | 35.6 | 38.5 | 36.9 | 37.0 | 40.2 | 41.4 | 39.9 |
| Lard, do | 19.9 | 19.3 | 19.4 | 20.5 | 19.8 | 19.7 | 18.5 | 17.6 | 17.7 | 18.3 | 17.8 | 18.3 |
| Vegetable lard substitute, do | 26.0 | 26.4 | 26.4 | 27.3 | 26.5 | 26.7 | 27.5 | 27.8 | 27.4 | 24.7 | 24.6 | 24.6 |
| Eggs, strictly fresh, dozen | 50.6 | 48.6 | 52.7 | 42.2 | 41.0 | 47.1 | 37.5 | 35.6 | 39.7 | 47.6 | 46.2 | 50.5 |
| Bread, pound | 10.7 | 9.7 | 9.8 | 9.6 | 9.6 | 9.6 | 10.2 | 10.1 | 10.1 | 8.9 | 8.9 | 8.9 |
| Flour, do | 5.8 | 5.3 | 5.6 | 4.7 | 4.7 | 4.8 | 5.2 | 4.4 | 4.7 | 5.9 | 5.4 | 5.8 |
| Corn meal, do | 7.7 | 7.7 | 7.6 | 5.7 | 5.9 | 5.8 | 4.7 | 4.6 | 4.6 | 5.3 | 5.1 | 5.1 |
| Rolled oats, do | 9.9 | 9.9 | 9.9 | 8.9 | 8.8 | 9.6 | 9.9 | 9.5 | 9.5 | 9.1 | 9.1 | 9.1 |
| Corn flakes, 8-ounce package | 9.9 | 9.8 | 9.8 | 9.7 | 9.9 | 9.9 | 10.0 | 9.5 | 9.5 | 9.4 | 9.2 | 9.4 |
| Wheat cereal, 28-ounce package | 25.6 | 25.5 | 25.5 | 26.6 | 26.7 | 26.7 | 28.1 | 27.2 | 27.2 | 24.9 | 24.2 | 24.3 |
| Macaroni, pound | 22.8 | 22.7 | 22.8 | 17.9 | 18.1 | 17.9 | 19.4 | 18.4 | 18.4 | 22.4 | 21.9 | 21.9 |
| Rice, do | 10.4 | 10.0 | 10.0 | 10.5 | 10.3 | 10.1 | 10.3 | 9.9 | 10.1 | 10.7 | 11.2 | 11.2 |
| Beans, navy, do | 11.9 | 14.1 | 14.5 | 13.3 | 14.8 | 15.2 | 14.0 | 14.2 | 14.1 | 12.5 | 14.1 | 14.1 |
| Potatoes, do | 2.0 | 3.7 | 4.2 | 1.9 | 3.8 | 3.8 | 2.0 | 3.9 | 3.5 | 2.4 | 4.0 | 4.6 |
| Onions, do | 5.8 | 6.8 | 6.4 | 4.1 | 5.4 | 4.3 | 6.8 | 7.5 | 6.7 | 6.0 | 7.4 | 7.2 |
| Cabbage, do | 3.8 | 4.6 | 4.8 | 3.9 | 4.7 | 4.0 | 3.4 | 4.8 | 4.5 | 4.4 | 4.5 | 6.7 |
| Beans, baked, No. 2 can | 11.8 | 12.2 | 12.2 | 11.3 | 12.5 | 12.4 | 10.6 | 11.3 | 11.1 | 10.4 | 10.9 | 11.1 |
| Corn, canned, do | 17.3 | 16.9 | 16.6 | 18.1 | 17.9 | 17.7 | 15.0 | 14.9 | 14.9 | 15.3 | 15.8 | 15.7 |
| Peas, canned, do | 17.8 | 17.4 | 17.9 | 18.6 | 18.3 | 18.5 | 15.9 | 15.5 | 15.4 | 15.2 | 14.8 | 15.0 |
| Tomatoes, canned, do | 12.0 | 14.0 | 14.2 | [4] 16.0 | [4] 16.6 | [4] 16.4 | 13.4 | 15.1 | 15.4 | 10.3 | 12.9 | 12.6 |
| Sugar, pound | 7.1 | 6.5 | 6.6 | 6.9 | 6.3 | 6.4 | 7.7 | 6.8 | 7.0 | 6.9 | 6.3 | 6.5 |
| Tea, do | 68.1 | 66.1 | 66.1 | 77.6 | 79.5 | 79.5 | 84.6 | 83.1 | 83.5 | 96.3 | 90.9 | 90.8 |
| Coffee, do | 50.7 | 49.8 | 50.0 | 52.0 | 51.0 | 51.5 | 52.7 | 51.7 | 51.6 | 47.9 | 46.5 | 46.8 |
| Prunes, do | 14.0 | 14.6 | 15.1 | 12.5 | 14.6 | 15.1 | 14.1 | 15.8 | 15.6 | 14.5 | 16.0 | 16.8 |
| Raisins, do | 14.0 | 11.9 | 11.8 | 12.8 | 10.7 | 10.6 | 14.3 | 12.3 | 12.6 | 13.8 | 13.0 | 13.2 |
| Bananas, dozen | 30.4 | 30.0 | 30.0 | [3] 10.2 | [3] 10.8 | 10.9 | [3] 7.9 | [3] 9.2 | [3] 9.0 | 29.1 | 30.8 | 30.5 |
| Oranges, do | 74.9 | 52.3 | 54.1 | 58.1 | 38.8 | 34.8 | 70.5 | 48.2 | 44.5 | 72.0 | 48.5 | 48.5 |

[3] Per pound.

[4] No. 2½ can.

### Comparison of Retail Food Costs in 51 Cities

TABLE 6 shows for 39 cities the percentage of increase or decrease in the retail cost of food [3] in August, 1929, compared with the average cost in the year 1913, in August, 1928, and July, 1929. For 12 other cities comparisons are given for the 1-year and the 1-month periods; these cities have been scheduled by the bureau at different dates since 1913. The percentage changes are based on actual retail prices secured each month from retail dealers and on the average family consumption of these articles in each city.[4]

Effort has been made by the bureau each month to have all schedules for each city included in the average prices. For the month of August, 98 per cent of all the firms supplying retail prices in the 51 cities sent in a report promptly. The following-named 37 cities had a perfect record; that is, every merchant who is cooperating with the bureau sent in his report in time for his prices to be included in the city averages: Baltimore, Birmingham, Bridgeport, Butte, Charleston (S. C.), Chicago, Cincinnati, Columbus, Dallas, Denver, Detroit, Fall River, Houston, Indianapolis, Jacksonville, Kansas City, Little Rock, Los Angeles, Louisville, Manchester, Memphis, Milwaukee, Minneapolis, Mobile, Newark, New Haven, Omaha, Peoria, Pittsburgh, Portland (Me.), Portland (Oreg.), Providence, Rochester, St. Paul, San Francisco, Scranton, and Springfield (Ill.).

TABLE 6.—PERCENTAGE CHANGE IN THE RETAIL COST OF FOOD IN AUGUST, 1929, COMPARED WITH THE COST IN JULY, 1929, AUGUST, 1928, AND WITH THE AVERAGE COST IN THE YEAR 1913, BY CITIES

| City | Percentage increase, August, 1929, compared with— | | | City | Percentage increase, August, 1929, compared with— | | |
|---|---|---|---|---|---|---|---|
| | 1913 | August, 1928 | July, 1929 | | 1913 | August, 1928 | July, 1929 |
| Atlanta | 63.7 | 3.9 | 1.7 | Minneapolis | 59.2 | 4.9 | *0.1 |
| Baltimore | 66.1 | 3.4 | 1.3 | Mobile | | 3.7 | 1.9 |
| Birmingham | 62.5 | 1.8 | 1.5 | Newark | 55.3 | 4.0 | 2.2 |
| Boston | 64.2 | 5.1 | 2.2 | New Haven | 62.0 | 3.6 | 1.7 |
| Bridgeport | | 3.0 | 2.0 | New Orleans | 58.8 | 3.3 | 1.1 |
| Buffalo | 65.8 | 5.1 | 1.5 | New York | 63.3 | 4.1 | 1.6 |
| Butte | | 4.4 | *1.6 | Norfolk | | 3.6 | 1.5 |
| Charleston, S. C. | 61.5 | 5.1 | 3.6 | Omaha | 48.2 | .6 | *1.3 |
| Chicago | 71.2 | 2.6 | .7 | Peoria | | 3.9 | 2.2 |
| Cincinnati | 64.5 | 3.7 | .2 | Philadelphia | 63.5 | 3.4 | 2.0 |
| Cleveland | 60.2 | 3.1 | 1.7 | Pittsburgh | 62.9 | 4.3 | 1.6 |
| Columbus | | 4.7 | 1.1 | Portland, Me. | | 3.0 | .7 |
| Dallas | 58.2 | 2.5 | 1.1 | Portland, Oreg. | 45.6 | 4.5 | *.3 |
| Denver | 44.4 | 3.8 | .0 | Providence | 64.4 | 4.8 | 1.6 |
| Detroit | 70.3 | 4.7 | 1.1 | Richmond | 63.0 | 1.7 | 1.6 |
| Fall River | 59.6 | 2.3 | 1.6 | Rochester | | 3.8 | 1.6 |
| Houston | | 4.5 | 0.4 | St. Louis | 64.4 | 5.5 | *.3 |
| Indianapolis | 59.7 | 4.8 | 1.6 | St. Paul | | 3.9 | .7 |
| Jacksonville | 49.2 | 2.0 | 2.6 | Salt Lake City | 38.8 | 4.9 | *2.1 |
| Kansas City | 57.9 | 6.6 | 2.0 | San Francisco | 56.3 | 4.8 | 1.8 |
| Little Rock | 53.5 | 5.4 | 2.3 | Savannah | | 4.4 | 2.1 |
| Los Angeles | 48.4 | 4.2 | 2.4 | Scranton | 67.8 | 2.9 | 2.2 |
| Louisville | 56.8 | 3.3 | .5 | Seattle | 52.4 | 4.9 | 1.0 |
| Manchester | 60.0 | 2.6 | 1.9 | Springfield, Ill. | | 2.2 | *.3 |
| Memphis | 54.6 | 4.1 | 1.6 | Washington | 71.1 | 2.9 | 1.9 |
| Milwaukee | 64.9 | 5.4 | *.2 | | | | |

* Decrease.

[3] For list of articles see note 1, p. 218.

[4] The consumption figures used from January, 1913, to December, 1920, for each article in each city are given in the Labor Review for November, 1918, pp. 94 and 95. The consumption figures which have been used for each month, beginning with January, 1921, are given in the Labor Review for March, 1921, p. 26.

## Retail Prices of Coal in the United States[a]

THE following table shows the average retail prices of coal on August 15, 1928, and July 15 and August 15, 1929, for the United States and for each of the cities from which retail food prices have been obtained. The prices quoted are for coal delivered to consumers, but do not include charges for storing the coal in cellar or coal bin where an extra handling is necessary.

In addition to the prices for Pennsylvania anthracite, prices are shown for Colorado, Arkansas, and New Mexico anthracite in those cities where these form any considerable portion of the sales for household use.

The prices shown for bituminous coal are averages of prices of the several kinds sold for household use.

AVERAGE RETAIL PRICES OF COAL PER TON OF 2,000 POUNDS, FOR HOUSEHOLD USE, ON AUGUST 15, 1928, AND JULY 15 AND AUGUST 15, 1929

| City, and kind of coal | 1928 | 1929 | |
|---|---|---|---|
| | Aug. 15 | July 15 | Aug. 15 |
| United States: | | | |
| Pennsylvania anthracite— | | | |
| Stove— | | | |
| Average price | $14.95 | $14.94 | $15.01 |
| Index (1913=100) | 193.5 | 193.4 | 194.3 |
| Chestnut— | | | |
| Average price | $14.76 | $14.63 | $14.67 |
| Index (1913=100) | 186.5 | 184.8 | 185.4 |
| Bituminous— | | | |
| Average price | $8.74 | $8.62 | $8.69 |
| Index (1913=100) | 160.9 | 158.6 | 159.9 |
| Atlanta, Ga.: | | | |
| Bituminous, prepared sizes | $7.43 | $7.49 | $7.76 |
| Baltimore, Md.: | | | |
| Pennsylvania anthracite— | | | |
| Stove | [1]15.25 | 14.00 | 14.00 |
| Chestnut | [1]14.75 | 13.50 | 13.50 |
| Bituminous, run of mine— | | | |
| High volatile | 7.82 | 7.79 | 7.88 |
| Birmingham, Ala.: | | | |
| Bituminous, prepared sizes | 7.00 | 6.98 | 7.15 |
| Boston, Mass.: | | | |
| Pennsylvania anthracite— | | | |
| Stove | 15.75 | 15.80 | 15.85 |
| Chestnut | 15.50 | 15.30 | 15.35 |
| Bridgeport, Conn.: | | | |
| Pennsylvania anthracite— | | | |
| Stove | 14.50 | 14.50 | 14.50 |
| Chestnut | 14.50 | 14.50 | 14.50 |
| Buffalo, N. Y.: | | | |
| Pennsylvania anthracite— | | | |
| Stove | 13.65 | 13.23 | 13.36 |
| Chestnut | 13.25 | 12.90 | 12.86 |
| Butte, Mont.: | | | |
| Bituminous, prepared sizes | 10.87 | 11.20 | 11.18 |
| Charleston, S. C.: | | | |
| Bituminous, prepared sizes | 11.00 | 9.67 | 9.67 |
| Chicago, Ill.: | | | |
| Pennsylvania anthracite— | | | |
| Stove | 16.25 | 16.55 | 16.65 |
| Chestnut | 15.95 | 16.10 | 16.20 |
| Chicago, Ill.—Continued. | | | |
| Bituminous— | | | |
| Prepared sizes— | | | |
| High volatile | $8.09 | $7.74 | $7.88 |
| Low volatile | 10.60 | 10.35 | 10.60 |
| Run of mine— | | | |
| Low volatile | 8.00 | 7.50 | 7.75 |
| Cincinnati, Ohio: | | | |
| Prepared sizes— | | | |
| High volatile | 5.65 | 5.70 | 5.70 |
| Low volatile | 7.53 | 7.63 | 7.88 |
| Cleveland, Ohio: | | | |
| Pennsylvania anthracite— | | | |
| Stove | 15.15 | 15.10 | 15.14 |
| Chestnut | 14.79 | 14.55 | 14.70 |
| Bituminous— | | | |
| Prepared sizes— | | | |
| High volatile | 7.37 | 7.19 | 7.16 |
| Low volatile | 9.12 | 9.03 | 9.21 |
| Columbus, Ohio: | | | |
| Bituminous— | | | |
| Prepared sizes— | | | |
| High volatile | 5.91 | 5.79 | 5.88 |
| Low volatile | 7.25 | 7.31 | 7.31 |
| Dallas, Tex.: | | | |
| Arkansas anthracite—Egg | 14.25 | 14.50 | 14.25 |
| Bituminous, prepared sizes | 12.40 | 12.33 | 12.58 |
| Denver, Colo.: | | | |
| Colorado anthracite— | | | |
| Furnace, 1 and 2 mixed | 15.73 | 14.80 | 14.80 |
| Stove, 3 and 5 mixed | 15.73 | 14.30 | 14.30 |
| Bituminous, prepared sizes | 10.57 | 9.67 | 9.88 |
| Detroit, Mich.: | | | |
| Pennsylvania anthracite— | | | |
| Stove | 15.50 | 15.50 | 15.50 |
| Chestnut | 15.00 | 15.00 | 15.00 |
| Bituminous— | | | |
| Prepared sizes— | | | |
| High volatile | 8.27 | 8.23 | 8.31 |
| Low volatile | 10.09 | 9.53 | 9.50 |
| Run of mine— | | | |
| Low volatile | 7.67 | 7.67 | 7.67 |

[1] Per ton of 2,240 pounds.

[a] Prices of coal were formerly secured semiannually and published in the March and September issues of the Labor Review. Since June, 1920, these prices have been secured and published monthly.

AVERAGE RETAIL PRICES OF COAL PER TON OF 2,000 POUNDS, FOR HOUSEHOLD USE, ON AUGUST 15, 1928, AND JULY 15 AND AUGUST 15, 1929—Continued

| City, and kind of coal | 1928 | 1929 | |
|---|---|---|---|
| | Aug. 15 | July 15 | Aug. 15 |
| Fall River, Mass.: | | | |
| Pennsylvania anthracite— | | | |
| Stove | $16.00 | $16.00 | $16.00 |
| Chestnut | 15.75 | 16.00 | 15.75 |
| Houston, Tex.: | | | |
| Bituminous, prepared sizes | 11.60 | 11.60 | 11.60 |
| Indianapolis, Ind.: | | | |
| Bituminous— | | | |
| Prepared sizes— | | | |
| High volatile | 6.29 | 6.01 | 6.07 |
| Low volatile | 8.29 | 7.93 | 8.11 |
| Run of mine— | | | |
| Low volatile | 6.96 | 6.63 | 6.83 |
| Jacksonville, Fla.: | | | |
| Bituminous, prepared sizes | 12.00 | 12.00 | 11.00 |
| Kansas City, Mo.: | | | |
| Arkansas anthracite— | | | |
| Furnace | 12.50 | 12.00 | 12.35 |
| Stove No. 4 | 14.25 | 13.17 | 13.33 |
| Bituminous, prepared sizes | 7.06 | 7.28 | 7.10 |
| Little Rock, Ark.: | | | |
| Arkansas anthracite—Egg | 12.50 | 12.50 | 12.50 |
| Bituminous, prepared sizes | 9.10 | 9.45 | 9.40 |
| Los Angeles, Calif.: | | | |
| Bituminous, prepared sizes | 15.25 | 15.75 | 16.00 |
| Louisville, Ky.: | | | |
| Bituminous— | | | |
| Prepared sizes— | | | |
| High volatile | 6.21 | 6.16 | 6.16 |
| Low volatile | 8.75 | 8.75 | 8.75 |
| Manchester, N. H.: | | | |
| Pennsylvania anthracite— | | | |
| Stove | 17.00 | 16.50 | 16.75 |
| Chestnut | 16.75 | 16.50 | 16.75 |
| Memphis, Tenn.: | | | |
| Bituminous, prepared sizes | 6.36 | 7.39 | 7.39 |
| Milwaukee, Wis.: | | | |
| Pennsylvania anthracite— | | | |
| Stove | 15.95 | 16.00 | 16.10 |
| Chestnut | 15.65 | 15.60 | 15.65 |
| Bituminous— | | | |
| Prepared sizes— | | | |
| High volatile | 7.80 | 7.67 | 7.68 |
| Low volatile | 10.45 | 10.49 | 10.68 |
| Minneapolis, Minn.: | | | |
| Pennsylvania anthracite— | | | |
| Stove | 17.95 | 18.00 | 18.10 |
| Chestnut | 17.65 | 17.60 | 17.65 |
| Bituminous— | | | |
| Prepared sizes— | | | |
| High volatile | 10.94 | 10.41 | 10.42 |
| Low volatile | 13.50 | 13.24 | 13.40 |
| Mobile, Ala: | | | |
| Bituminous, prepared sizes | 9.46 | 9.02 | 9.02 |
| Newark, N. J.: | | | |
| Pennsylvania anthracite— | | | |
| Stove | 13.75 | 13.65 | 13.65 |
| Chestnut | 13.25 | 13.15 | 13.15 |
| New Haven, Conn.: | | | |
| Pennsylvania anthracite— | | | |
| Stove | 14.70 | 14.60 | 14.66 |
| Chestnut | 14.70 | 14.60 | 14.66 |
| New Orleans, La.: | | | |
| Bituminous, prepared sizes | 9.21 | 9.21 | 9.21 |
| New York, N. Y.: | | | |
| Pennsylvania anthracite— | | | |
| Stove | 14.50 | 14.13 | 14.25 |
| Chestnut | 14.00 | 13.63 | 13.75 |
| Norfolk, Va.: | | | |
| Pennsylvania anthracite— | | | |
| Stove | 14.00 | 14.00 | 14.00 |
| Chestnut | 14.00 | 14.00 | 14.00 |
| Norfolk, Va.—Continued. | | | |
| Bituminous— | | | |
| Prepared sizes— | | | |
| High volatile | $7.81 | $7.81 | $7.81 |
| Low volatile | 9.50 | 9.00 | 9.00 |
| Run of mine— | | | |
| Low volatile | 7.00 | 7.00 | 7.00 |
| Omaha, Nebr.: | | | |
| Bituminous, prepared sizes | 9.38 | 9.60 | 9.71 |
| Peoria, Ill.: | | | |
| Bituminous, prepared sizes | 6.54 | 6.49 | 6.52 |
| Philadelphia, Pa.: | | | |
| Pennsylvania anthracite— | | | |
| Stove | [1] 13.99 | [1] 14.50 | [1] 14.50 |
| Chestnut | [1] 13.71 | [1] 14.07 | [1] 14.00 |
| Pittsburgh, Pa.: | | | |
| Pennsylvania anthracite— | | | |
| Chestnut | 14.50 | 15.00 | 15.00 |
| Bituminous, prepared sizes | 5.15 | 5.18 | 5.11 |
| Portland, Me.: | | | |
| Pennsylvania anthracite— | | | |
| Stove | 16.56 | 16.20 | 16.32 |
| Chestnut | 16.56 | 16.20 | 16.32 |
| Portland, Oreg.: | | | |
| Bituminous, prepared sizes | 12.38 | 12.57 | 12.54 |
| Providence, R. I.: | | | |
| Pennsylvania anthracite— | | | |
| Stove | [2] 15.50 | [2] 15.50 | [2] 15.50 |
| Chestnut | [2] 15.50 | [2] 15.50 | [2] 15.50 |
| Richmond, Va.: | | | |
| Pennsylvania anthracite— | | | |
| Stove | 14.33 | 14.00 | 14.00 |
| Chestnut | 14.33 | 14.00 | 14.00 |
| Bituminous— | | | |
| Prepared sizes— | | | |
| High volatile | 8.25 | 7.88 | 7.88 |
| Low volatile | 9.26 | 8.53 | 8.53 |
| Run of mine— | | | |
| Low volatile | 7.25 | 6.75 | 6.75 |
| Rochester, N. Y.: | | | |
| Pennsylvania anthracite— | | | |
| Stove | 14.35 | 14.25 | 14.50 |
| Chestnut | 14.00 | 13.75 | 14.00 |
| St. Louis, Mo.: | | | |
| Pennsylvania anthracite— | | | |
| Stove | 16.40 | 16.45 | 16.45 |
| Chestnut | 16.15 | 16.20 | 16.20 |
| Bituminous, prepared sizes | 5.93 | 6.28 | 6.54 |
| St. Paul, Minn.: | | | |
| Pennsylvania anthracite— | | | |
| Stove | 17.95 | 18.00 | 18.10 |
| Chestnut | 17.65 | 17.60 | 17.65 |
| Bituminous— | | | |
| Prepared sizes— | | | |
| High volatile | 10.71 | 10.18 | 10.21 |
| Low volatile | 13.50 | 13.27 | 13.40 |
| Salt Lake City, Utah: | | | |
| Colorado anthracite— | | | |
| Furnace, 1 and 2 mixed | 18.00 | 18.00 | 18.00 |
| Stove, 3 and 5 mixed | 18.00 | 18.00 | 18.00 |
| Bituminous, prepared sizes | 8.48 | 7.93 | 7.96 |
| San Francisco, Calif.: | | | |
| New Mexico anthracite— | | | |
| Cerillos egg | 25.00 | 25.00 | 25.00 |
| Colorado anthracite— | | | |
| Egg | 24.50 | 24.50 | 24.50 |
| Bituminous, prepared sizes | 16.13 | 16.00 | 16.13 |
| Savannah, Ga.: | | | |
| Bituminous, prepared sizes | [3] 9.80 | [3] 9.54 | [3] 9.54 |
| Scranton, Pa.: | | | |
| Pennsylvania anthracite— | | | |
| Stove | 10.28 | 10.12 | 10.23 |
| Chestnut | 10.08 | 9.75 | 9.87 |

[1] Per ton of 2,240 pounds.

[2] The average price of coal delivered in bin is 50 cents higher than here shown. Practically all coal is delivered in bin.

[3] All coal sold in Savannah is weighed by the city. A charge of 10 cents per ton or half ton is made. This additional charge has been included in the above price.

AVERAGE RETAIL PRICES OF COAL PER TON OF 2,000 POUNDS, FOR HOUSEHOLD USE, ON AUGUST 15, 1928, AND JULY 15 AND AUGUST 15, 1929—Continued

| City, and kind of coal | 1928 | 1929 | |
|---|---|---|---|
| | Aug. 15 | July 15 | Aug. 15 |
| Seattle, Wash.: | | | |
| Bituminous, prepared sizes | $9.55 | $10.42 | $10.63 |
| Springfield, Ill.: | | | |
| Bituminous, prepared sizes | 4.44 | 4.34 | 4.34 |
| Washington, D. C.: | | | |
| Pennsylvania anthracite— | | | |
| Stove | [1] 15.11 | [1] 15.29 | [1] 15.41 |
| Chestnut | [1] 14.74 | [1] 14.79 | [1] 14.91 |
| Washington, D. C.—Contd. | | | |
| Bituminous— | | | |
| Prepared sizes— | | | |
| High volatile | [1] $8.63 | [1] $8.63 | [1] $8.63 |
| Low volatile | [1] 10.50 | [1] 11.00 | [1] 11.00 |
| Run of mine— | | | |
| Mixed | [1] 7.60 | [1] 7.63 | [1] 7.63 |

[1] Per ton of 2,240 pounds.

## Comparison of Retail-Price Changes in the United States and in Foreign Countries

THE principal index numbers of retail prices published by foreign countries have been brought together with those of this bureau in the subjoined table after having been reduced, in most cases, to a common base, namely, prices for July, 1914, equal 100. This base was selected instead of the average for the year 1913, which is used in other tables of index numbers of retail prices compiled by the bureau, because of the fact that in numerous instances satisfactory information for 1913 was not available. Some of the countries shown in the table now publish index numbers of retail prices on the July, 1914, base. In such cases, therefore, the index numbers are reproduced as published. For other countries the index numbers here shown have been obtained by dividing the index for each month specified in the table by the index for July, 1914, or the nearest period thereto as published in the original sources. As stated in the table, the number of articles included in the index numbers for the different countries differs widely. These results, which are designed merely to show price trends and not actual differences in the several countries, should not, therefore, be considered as closely comparable with one another. In certain instances, also, the figures are not absolutely comparable from month to month over the entire period, owing to slight changes in the list of commodities and the localities included on successive dates.

## INDEX NUMBERS OF RETAIL PRICES IN THE UNITED STATES AND IN OTHER COUNTRIES

| Country | United States | Canada | Belgium | Czecho-slovakia | Den-mark | Finland | France (except Paris) | France (Paris) | Germany |
|---|---|---|---|---|---|---|---|---|---|
| Number of localities | 51 | 60 | 59 | Entire country | 100 | 21 | 320 | 1 | 71 |
| Commodities included | 43 foods | 29 foods | 56 (foods etc.) | 29 foods | Foods | 36 foods | 13 (11 foods) | 13 (11 foods) | Foods |
| Computing agency | Bureau of Labor Statistics | Department of Labor | Ministry of Industry and Labor | Office of Statistics | Government Statistical Department | Central Bureau of Statistics | Ministry of Labor | Ministry of Labor | Federal Statistical Bureau |
| Base=100 | July 1914 | July 1914 | April 1914 | July 1914 | July 1914 | January-June 1914 | August 1914 | July 1914 | October 1913–July, 1914 |
| 1924 | | | | | | | | | |
| Jan | 146 | 145 | 480 | 836 | 194 | 1089 | ---------- | 376 | 127 |
| Apr | 138 | 137 | 498 | 829 | ---------- | 1035 | ---------- | 380 | 123 |
| July | 140 | 134 | 493 | 837 | 200 | 1052 | ---------- | 360 | 126 |
| Oct | 145 | 139 | 513 | 877 | ---------- | 1156 | ---------- | 383 | 134 |
| 1925 | | | | | | | | | |
| Jan | 151 | 145 | 521 | 899 | 215 | 1130 | ---------- | 408 | 137 |
| Apr | 148 | 142 | 506 | 901 | ---------- | 1137 | ---------- | 409 | 144 |
| July | 156 | 141 | 509 | 916 | 210 | 1145 | ---------- | 421 | 154 |
| Oct | 158 | 147 | 533 | 875 | ---------- | 1165 | ---------- | 433 | 151 |
| 1926 | | | | | | | | | |
| Jan | 161 | 157 | 527 | 854 | 177 | 1090 | ---------- | 480 | 143 |
| Feb | 158 | 155 | 526 | 845 | ---------- | 1106 | 503 | 495 | 142 |
| Mar | 156 | 154 | 521 | 832 | ---------- | 1100 | ---------- | 497 | 141 |
| Apr | 159 | 153 | 529 | 832 | ---------- | 1085 | ---------- | 503 | 142 |
| May | 158 | 152 | 558 | 837 | ---------- | 1078 | 523 | 522 | 142 |
| June | 156 | 149 | 579 | 861 | ---------- | 1090 | ---------- | 544 | 143 |
| July | 154 | 149 | 637 | 876 | 159 | 1105 | ---------- | 574 | 145 |
| Aug | 152 | 150 | 681 | 878 | ---------- | 1153 | 610 | 587 | 146 |
| Sept | 155 | 147 | 684 | 878 | ---------- | 1137 | ---------- | 590 | 145 |
| Oct | 157 | 147 | 705 | 888 | ---------- | 1126 | ---------- | 624 | 145 |
| Nov | 158 | 148 | 730 | 902 | ---------- | 1114 | 647 | 628 | 148 |
| Dec | 158 | 151 | 741 | 912 | ---------- | 1110 | ---------- | 599 | 150 |
| 1927 | | | | | | | | | |
| Jan | 156 | 153 | 755 | 914 | 156 | 1092 | ---------- | 592 | 151 |
| Feb | 153 | 151 | 770 | 914 | ---------- | 1095 | 586 | 585 | 152 |
| Mar | 150 | 149 | 771 | 915 | ---------- | 1086 | ---------- | 581 | 151 |
| Apr | 150 | 146 | 774 | 923 | 152 | 1069 | ---------- | 580 | 150 |
| May | 152 | 145 | 776 | 931 | ---------- | 1058 | 572 | 589 | 151 |
| June | 155 | 146 | 785 | 949 | ---------- | 1072 | ---------- | 580 | 153 |
| July | 150 | 147 | 790 | 962 | 153 | 1102 | ---------- | 557 | 157 |
| Aug | 149 | 147 | 787 | 919 | ---------- | 1159 | 553 | 539 | 150 |
| Sept | 151 | 146 | 794 | 910 | ---------- | 1146 | ---------- | 532 | 151 |
| Oct | 153 | 148 | 804 | 907 | 152 | 1156 | ---------- | 520 | 152 |
| Nov | 153 | 149 | 809 | 905 | ---------- | 1175 | 526 | 500 | 152 |
| Dec | 153 | 151 | 812 | 913 | ---------- | 1171 | ---------- | 523 | 153 |
| 1928 | | | | | | | | | |
| Jan | 152 | 151 | 813 | 913 | 152 | 1126 | ---------- | 530 | 152 |
| Feb | 148 | 149 | 811 | 910 | ---------- | 1112 | 522 | 522 | 151 |
| Mar | 148 | 147 | 806 | 901 | ---------- | 1123 | ---------- | 524 | 151 |
| Apr | 149 | 146 | 807 | 905 | 152 | 1119 | ---------- | 532 | 151 |
| May | 150 | 146 | 805 | 908 | ---------- | 1113 | 530 | 546 | 151 |
| June | 149 | 145 | 811 | 928 | ---------- | 1126 | ---------- | 557 | 152 |
| July | 150 | 146 | 811 | 943 | 153 | 1155 | ---------- | [1] 111 | 154 |
| Aug | 151 | 149 | 819 | 943 | ---------- | 1191 | 536 | [1] 110 | 156 |
| Sept | 154 | 150 | 825 | 928 | ---------- | 1174 | ---------- | [1] 111 | 153 |
| Oct | 153 | 152 | 834 | 907 | 146 | 1183 | ---------- | [1] 115 | 152 |
| Nov | 154 | 152 | 845 | 900 | ---------- | 1194 | 562 | [1] 119 | 152 |
| Dec | 152 | 152 | 852 | 905 | ---------- | 1186 | ---------- | [1] 121 | 153 |
| 1929 | | | | | | | | | |
| Jan | 151 | 152 | 856 | 900 | 147 | 1156 | ---------- | [1] 122 | 153 |
| Feb | 151 | 150 | 859 | 911 | ---------- | 1141 | 576 | [1] 122 | 156 |
| Mar | 150 | 151 | 862 | 913 | ---------- | 1135 | ---------- | [1] 123 | 159 |
| Apr | 148 | 148 | 860 | 901 | 150 | 1118 | ---------- | [1] 125 | 154 |
| May | 150 | 147 | 864 | 906 | ---------- | 1104 | 583 | [1] 127 | 154 |
| June | 151 | 147 | 867 | 907 | ---------- | 1103 | ---------- | [1] 127 | 154 |

[1] In gold.

INDEX NUMBERS OF RETAIL PRICES IN THE UNITED STATES AND IN OTHER COUNTRIES—Continued

| Country | Italy | Netherlands (The Hague) | Norway | Sweden | Switzerland | United Kingdom | South Africa | India (Bombay) | Australia | New Zealand |
|---|---|---|---|---|---|---|---|---|---|---|
| Number of localities | 47 | 1 | 31 | 49 | 33 | 630 | 9 | 1 | 30 | 25 |
| Commodities included | 20 foods and charcoal | Foods | Foods | 50 (43 foods, 7 fuel and light) | Foods | 21 foods | 24 foods | 17 foods | 46 foods and groceries | 59 foods |
| Computing agency | Ministry of National Economy | Central Bureau of Statistics | Central Bureau of Statistics | Social Board | Labor Office (revised) | Ministry of Labor | Office of Census and Statistics | Labor Office (revised) | Bureau of Census and Statistics | Census and Statistics Office |
| Base=100 | 1913 | 1921 | July, 1914 | July, 1914 | July, 1914 | July, 1914 | 1914 | July, 1914 | July, 1914 | July, 1914 |
| 1924 | | | | | | | | | | |
| Jan | 527 | 82.5 | 230 | 163 | 173 | 175 | 120 | 154 | 155 | 150 |
| Apr | 527 | 81.7 | 240 | 159 | 169 | 167 | 122 | 143 | 150 | 150 |
| July | 538 | 80.8 | 248 | 159 | 170 | 162 | 117 | 151 | 148 | 148 |
| Oct | 556 | 82.3 | 264 | 172 | 174 | 172 | 120 | 156 | 146 | 145 |
| 1925 | | | | | | | | | | |
| Jan | 609 | 80.2 | 277 | 170 | 172 | 178 | 120 | 152 | 148 | 147 |
| Apr | 606 | 86.7 | 276 | 170 | 169 | 170 | 124 | 153 | 152 | 149 |
| July | 605 | 81.3 | 260 | 169 | 169 | 167 | 120 | 152 | 156 | 151 |
| Oct | 645 | 79.3 | 228 | 166 | 168 | 172 | 119 | 148 | 157 | 155 |
| 1926 | | | | | | | | | | |
| Jan | 658 | 76.6 | 216 | 162 | 165 | 171 | 116 | 151 | 155 | 154 |
| Feb | 649 | | 212 | 160 | 163 | 168 | 117 | 150 | 154 | 153 |
| Mar | 636 | | 205 | 159 | 161 | 165 | 118 | 151 | 159 | 152 |
| Apr | 633 | 80.1 | 198 | 158 | 161 | 159 | 119 | 150 | 163 | 151 |
| May | 643 | | 195 | 157 | 159 | 158 | 119 | 150 | 163 | 151 |
| June | 647 | | 194 | 157 | 159 | 158 | 118 | 152 | 162 | 151 |
| July | 645 | 73.5 | 198 | 156 | 159 | 161 | 117 | 155 | 159 | 149 |
| Aug | 648 | | 196 | 156 | 157 | 161 | 117 | 153 | 157 | 150 |
| Sept | 656 | | 193 | 157 | 158 | 162 | 117 | 152 | 155 | 148 |
| Oct | 662 | 75.7 | 191 | 157 | 160 | 163 | 120 | 153 | 153 | 147 |
| Nov | 655 | | 186 | 158 | 159 | 169 | 119 | 152 | 155 | 146 |
| Dec | 641 | | 184 | 157 | 159 | 169 | 117 | 154 | 158 | 149 |
| 1927 | | | | | | | | | | |
| Jan | 629 | 76.3 | 180 | 156 | 158 | 167 | 116 | 155 | 158 | 148 |
| Feb | 615 | | 177 | 153 | 157 | 164 | 117 | 152 | 153 | 146 |
| Mar | 610 | | 173 | 151 | 156 | 162 | 118 | 152 | 151 | 146 |
| Apr | 606 | 77.0 | 169 | 151 | 156 | 155 | 119 | 151 | 151 | 145 |
| May | 599 | | 169 | 150 | 156 | 154 | 121 | 150 | 152 | 145 |
| June | 558 | | 172 | 151 | 157 | 154 | 120 | 151 | 153 | 145 |
| July | 540 | 76.5 | 175 | 151 | 157 | 159 | 119 | 154 | 152 | 144 |
| Aug | 532 | | 175 | 152 | 157 | 156 | 118 | 155 | 155 | 144 |
| Sept | 525 | | 174 | 156 | 159 | 157 | 117 | 151 | 157 | 143 |
| Oct | 530 | 79.5 | 173 | 155 | 159 | 161 | 119 | 148 | 159 | 143 |
| Nov | 534 | | 171 | 155 | 161 | 163 | 119 | 147 | 157 | 144 |
| Dec | 534 | | 171 | 154 | 160 | 163 | 119 | 149 | 155 | 146 |
| 1928 | | | | | | | | | | |
| Jan | 531 | 81.6 | 170 | 153 | 159 | 162 | 119 | 151 | 154 | 147 |
| Feb | 529 | | 170 | 153 | 158 | 159 | 118 | 146 | 152 | 145 |
| Mar | 522 | | 171 | 154 | 157 | 155 | 118 | 142 | 153 | 145 |
| Apr | 522 | 79.4 | 171 | 154 | 156 | 155 | 119 | 140 | 154 | 144 |
| May | 529 | | 172 | 155 | 156 | 154 | 120 | 144 | 154 | 146 |
| June | 533 | | 171 | 157 | 156 | 156 | 118 | 142 | 154 | 147 |
| July | 516 | 76.2 | 173 | 157 | 157 | 157 | 116 | 143 | 152 | 147 |
| Aug | 520 | | 170 | 156 | 156 | 156 | 115 | 142 | 150 | 147 |
| Sept | 526 | | 164 | 155 | 157 | 156 | 115 | 141 | 150 | 147 |
| Oct | 536 | 75.5 | 163 | 153 | 158 | 157 | 115 | 142 | 150 | 149 |
| Nov | 555 | | 161 | 152 | 158 | 159 | 115 | 144 | 150 | 150 |
| Dec | 564 | | 161 | 151 | 158 | 160 | 115 | 145 | 152 | 152 |
| 1929 | | | | | | | | | | |
| Jan | 565 | 76.0 | 158 | 150 | 157 | 159 | 115 | 146 | 161 | 140 |
| Feb | 565 | | 157 | 151 | 157 | 156 | 115 | 146 | 161 | 148 |
| Mar | 571 | | 158 | 152 | 156 | 157 | 117 | 146 | 160 | 146 |
| Apr | 566 | 72.3 | 156 | 150 | 155 | 150 | 119 | 145 | 162 | 147 |
| May | 563 | | 156 | 149 | 154 | 149 | 119 | 143 | 160 | 148 |
| June | 564 | | 156 | 149 | 156 | 147 | 118 | 144 | 161 | 147 |

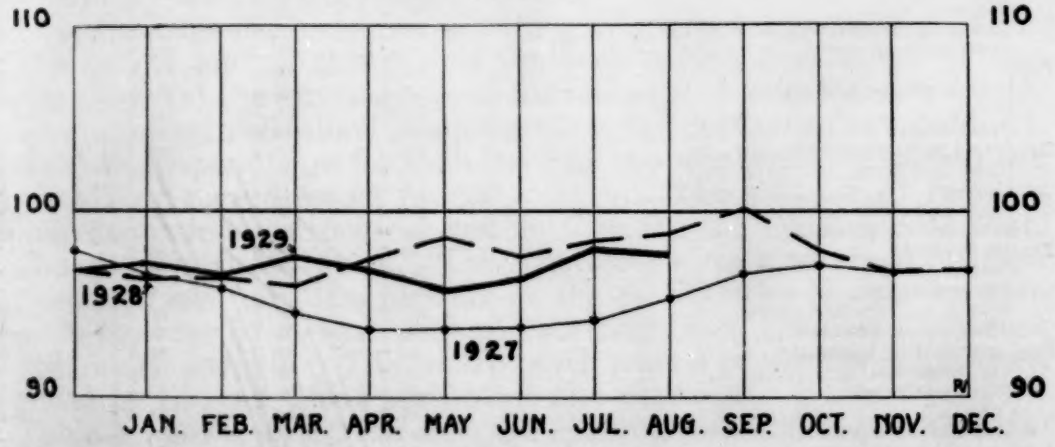
## Index Numbers of Wholesale Prices in August, 1929

A SLIGHT reaction from the recent upward trend of wholesale prices is shown for August by information collected in leading markets by the Bureau of Labor Statistics of the United States Department of Labor. The bureau's weighted index number, with prices in 1926 as 100, stands at 97.7 for August compared with 98 for July, a decrease of one-third of 1 per cent. Compared with August, 1928, with an index number of 98.9, a decrease of over 1 per cent is shown. Based on these figures, the purchasing power of the dollar in August was 102.4 compared with 100 in the year 1926.

Farm products showed a slight price decline from July to August, due to decreases for most grains, beef cattle, hogs, sheep, and lambs. Wheat prices in particular were well below those of the month before. Eggs, hay, and potatoes, on the other hand, averaged higher. Prices of cotton and wool showed practically no change.

Among foods, increases were reported for butter, oranges, lemons, cured meats, prunes, and raisins, resulting in a net increase for the group, while flour and some fresh meats were lower.

TREND OF WHOLESALE PRICES
[1926=100]




Hides and skins continued their recent upward movement, while leather declined slightly. Boots and shoes showed no change in the general price level.

Prices of cotton textiles were mostly unchanged from those of July, while silk and rayon advanced and woolen and worsted goods declined slightly. Other textile products, including burlap, jute, manila rope, and sisal, were somewhat higher.

Reductions in prices of Pennsylvania crude oil and gasoline caused a net decrease in the fuel and lighting group, while iron and steel products and automobiles also averaged lower.

A minor increase was reported for the group of chemicals and drugs, while small increases for lumber, brick, and paint materials were offset by declines for cement and other materials, leaving the general index for building materials unchanged. Practically no changes in the price level were shown for house-furnishing goods and miscellaneous commodities.

Raw materials and finished products showed small price declines from the July level, with semimanufactured articles showing a slight advance and nonagricultural commodities as a whole a noticeable decrease from the price level of the preceding month.

Of the 550 commodities or price series for which comparable information for July and August was collected, increases were shown in 133 instances and decreases in 138 instances. In 279 instances no change in price was reported.

Comparing prices in August with those of a year ago, as measured by these index numbers, it is seen that hides and leather products were considerably lower and fuel and lighting materials, textile products, foods, and chemicals and drugs were somewhat lower. Practically no change in the price level is shown for farm products and house-furnishing goods, while lumber, structural steel, and paint materials in the group of building materials, and cattle feed in the group of miscellaneous commodities, were appreciably higher.

INDEX NUMBERS OF WHOLESALE PRICES BY GROUPS AND SUBGROUPS OF COMMODITIES

[1926=100]

| Groups and subgroups | August, 1928 | July, 1929 | August, 1929 | Purchasing power of the dollar, August, 1929 |
|---|---|---|---|---|
| All commodities | 98.9 | 98.0 | 97.7 | 102.4 |
| Farm products | 107.0 | 107.6 | 107.1 | 93.4 |
| Grains | 95.4 | 102.2 | 99.3 | 100.7 |
| Livestock and poultry | 116.7 | 114.9 | 112.8 | 88.7 |
| Other farm products | 104.2 | 104.5 | 105.8 | 94.5 |
| Foods | 104.1 | 102.8 | 103.1 | 97.0 |
| Butter, cheese, and milk | 107.3 | 103.4 | 104.4 | 95.8 |
| Meats | 119.3 | 116.7 | 116.0 | 86.2 |
| Other foods | 93.5 | 94.0 | 94.8 | 105.5 |
| Hides and leather products | 121.0 | 109.2 | 109.7 | 91.2 |
| Hides and skins | 140.6 | 114.5 | 117.2 | 85.3 |
| Leather | 128.5 | 112.1 | 111.5 | 89.7 |
| Boots and shoes | 110.8 | 106.1 | 106.1 | 94.3 |
| Other leather products | 108.6 | 105.8 | 106.0 | 94.3 |
| Textile products | 96.3 | 92.8 | 93.1 | 107.4 |
| Cotton goods | 101.4 | 98.7 | 98.7 | 101.3 |
| Silk and rayon | 81.7 | 78.6 | 79.9 | 125.2 |
| Woolen and worsted goods | 101.0 | 97.2 | 96.5 | 103.6 |
| Other textile products | 89.1 | 79.7 | 84.5 | 118.3 |
| Fuel and lighting materials | 84.6 | 82.0 | 80.9 | 133.6 |
| Anthracite coal | 90.3 | 89.1 | 90.0 | 111.1 |
| Bituminous coal | 92.5 | 89.9 | 90.5 | 110.5 |
| Coke | 84.9 | 84.7 | 84.6 | 118.2 |
| Manufactured gas | 95.0 | 94.6 | (1) | |
| Petroleum products | 76.8 | 73.3 | 70.3 | 142.2 |
| Metals and metal products | 100.4 | 105.0 | 104.3 | 95.9 |
| Iron and steel | 94.5 | 97.9 | 97.6 | 102.5 |
| Nonferrous metals | 92.9 | 105.1 | 105.1 | 95.1 |
| Agricultural implements | 98.8 | 98.3 | 98.3 | 101.7 |
| Automobiles | 108.9 | 112.2 | 110.7 | 90.3 |
| Other metal products | 96.9 | 98.5 | 98.5 | 101.5 |
| Building materials | 94.6 | 96.7 | 96.7 | 103.4 |
| Lumber | 90.3 | 94.0 | 94.2 | 106.2 |
| Brick | 92.6 | 89.1 | 89.6 | 111.6 |
| Cement | 96.5 | 94.6 | 92.0 | 108.7 |
| Structural steel | 94.5 | 99.6 | 99.6 | 100.4 |
| Paint materials | 86.2 | 90.7 | 92.8 | 107.8 |
| Other building materials | 104.4 | 105.7 | 105.4 | 94.9 |
| Chemicals and drugs | 94.7 | 93.4 | 93.7 | 106.7 |
| Chemicals | 100.5 | 99.1 | 99.3 | 100.7 |
| Drugs and pharmaceuticals | 70.3 | 69.8 | 70.1 | 142.7 |
| Fertilizer materials | 93.4 | 90.7 | 90.5 | 110.5 |
| Fertilizers | 97.4 | 97.3 | 98.2 | 101.8 |
| House-furnishing goods | 97.2 | 97.2 | 97.1 | 103.0 |
| Furniture | 97.6 | 96.7 | 96.7 | 103.4 |
| Furnishings | 96.9 | 97.5 | 97.3 | 102.8 |
| Miscellaneous | 79.3 | 81.3 | 81.3 | 123.0 |
| Cattle feed | 111.5 | 120.5 | 124.7 | 80.2 |
| Paper and pulp | 88.8 | 88.2 | 88.2 | 113.4 |
| Rubber | 39.7 | 43.9 | 42.6 | 234.7 |
| Automobile tires | 61.6 | 55.3 | 55.3 | 180.8 |
| Other miscellaneous | 98.1 | 109.0 | 108.6 | 92.1 |
| Raw materials | 99.2 | 99.1 | 98.9 | 101.1 |
| Semimanufactured articles | 97.3 | 96.0 | 96.2 | 104.0 |
| Finished products | 99.1 | 97.8 | 97.3 | 102.8 |
| Nonagricultural commodities | 96.7 | 95.5 | 94.3 | 106.0 |

[1] Data not yet available.

# COST OF LIVING

## Cost of Living of Federal Employees in Five Cities

### Part 3: Miscellaneous Expenditures

IN 1928 the Bureau of Labor Statistics made a survey of the cost of living in the families of 506 employees of the Federal Government in five cities, not including Washington. The study was made in cooperation with the Personnel Classification Board. A general analysis of income and expenses and surplus and deficit in these families was published in the August, 1929, Review and an itemization of food consumption and cost in the September Review. The present article covers miscellaneous expenses.

Miscellaneous expenditures covering 31 items are presented in the tables at the end of this article for each of the five cities. These tables show (1) the amounts spent for miscellaneous items as a whole, by the families in classified income groups, for the five cities combined, and (2) the expenditure for each item by the total number of families in each city regardless of family income. The number of families having each kind of expense, together with the average amount spent, is also given in these tables. The size of the family, as given in these tables, includes only the persons in the family who shared or were eligible to share in these expenses; this limitation, therefore, excludes boarders and lodgers. The time of each person in the home has been reduced to an equivalent person for one year.

Table 1 shows, first, the average income and the total miscellaneous expenditures of the families in each income group, and, second, the expenditure for each item. Two averages are given in that part of the table relating to each item; one, the average family expenditure for each item based upon all the families in the income group, regardless of the number of families having expenditure for that item, and the second based upon only such families as had an expenditure for the item named. This affords an opportunity to study expenses as spread over all families as a whole, as well as expenses in families reporting such items.

The tendency for the amount spent for miscellaneous items to increase with an increase in the family income is very noticeable. The lowest income group—under $1,500—averaging 3.99 persons per family, spent $335.03, or 25.3 per cent, of their annual income, for miscellaneous expenses, while the highest income group—$3,600 and over—averaging 4.61 persons per family, spent $1,484.57, or 34.4 per cent, of their annual income for miscellaneous expenses.

There was a little variation in the average persons per family for the different income groups, which averaged slightly under four persons for the first three income groups and slightly over four persons

per family for the remaining groups with the exception of the highest income group, which averaged 4.6 persons per family. The average for all groups was 4.1 persons.

*Health expenses.*—This item includes the amounts spent for doctor, medicine, hospital, nurse, dentist, oculist, glasses, etc. It cost the 506 families an average of $112.99, or $27.42 per capita, for the care of health during the year. The health expense was lowest in Baltimore, averaging $75.50 for the 96 families canvassed and highest in Chicago, averaging $138.91 for the 102 families. Not all families, however, reported health expenses during the year covered; thus, one family each in Baltimore and Boston and five families each in New Orleans and New York reported no health expense. For the 494 families, or 97.6 per cent of the total number having such an expenditure, the average amount spent during the year was $115.74.

*Life, accident, and health insurance.*—Regardless of their income, nearly all husbands realized the necessity of providing for the future care of their families through insurance. In the lowest income group 95.7 per cent of the families carried this kind of insurance, with an average family expense of $68.82, while in the highest income group 96.9 per cent of the families reported insurance averaging $190.73 for each family. In the group with an income of $3,300 and under $3,600, all the families carried insurance, and the cost averaged $139.38 for the year. Considering all families carrying this insurance, 475, or 93.9 per cent, reported insurance which averaged $102.03 per family.

The average annual premium amounted to $95.78 for all families, including the few not thus insured. This expense was lowest in New Orleans, averaging $74.48 per family, and highest in Chicago, averaging $107.89 per family. The cost of insurance is here considered as an expense, although it might be viewed as a part of the savings.

*Retirement.*—Three and one-half per cent was deducted from the gross earnings of most of these Government employees for retirement fund charges. Inasmuch as this study included some Federal employees outside of civil service, this deduction did not apply to all employees. There were 443, or 87.5 per cent of all the families included, that reported retirement deductions, averaging $62.21 per family. The average cost of retirement for the year was $54.47 spread over all of the 506 families. This cost, like life insurance, is considered as an expense in this study, although it might be viewed as an item of saving.

*Personal property insurance.*—Expense for this item averaged $9.95 for the 143 families, or 28.3 per cent of all families having such expense. The average annual cost for personal property insurance divided among all 506 families was $2.81. This cost was lowest in Boston, averaging $1.88, and highest in New Orleans, averaging $5.04. This payment, however, often covered more than one year and probably more families had the protection of this insurance than had an expenditure for it during the year.

*Personal property and poll tax.*—Of the families visited, 226, or 44.7 per cent, paid personal property and poll taxes, averaging $3.74 per family. This item averaged $1.67 over all 506 families.

*Church and Sunday school.*—Contribution to church and Sunday school was given by 455, or 89.9 per cent of all the 506 families and averaged $26.85 per year for these families. The average for all 506

families was $24.15. In New Orleans the average family contribution during the year was $18.24, while in Boston the average was $33.66. Only one family in Boston reported no expense for this item, but in Chicago 21 families were in this class.

*Labor organizations.*—This item of expense was reported by 171, or 33.8 per cent of the 506 families, and the annual dues averaged $5.51 for these families. The average for all 506 families was $1.86. In New York, union dues averaged $1.36 per family and in Chicago $2.24 for the year, distributed among all families canvassed.

*Lodges, clubs, and societies.*—Of the 506 families included, 270, or 53.4 per cent, belonged to some lodge, club, or society. The average annual dues paid to these organizations averaged $15.86 for the families having such expense, and $8.46 for all 506 families.

*Street-car fare.*—Under this heading was included bus, jitney, ferry, and suburban commuting fares. Considering all 506 families, this cost averaged $63.16 per year. This was an expense borne by practically every family, 497, or 98.2 per cent, reporting street-car fares, averaging $64.31. Only two families in Baltimore, 3 in Boston, and 4 in New Orleans reported no expense for street-car fares.

*Automobile payments.*—It is interesting to note that only 31 families (6.1 per cent) reported the purchase of automobiles during the year covered. The payments in the year by these families averaged $413.68. Five families paying on automobiles this year bought their automobiles prior to the period covered by the bureau's study, and their payments during this year averaged $228.72. For all 36 families making automobile payment the payments averaged $388. Spread over all 506 families, it is seen that the average family paid $27.60 per year for automobile cost.

*Automobile supplies and repairs.*—Approximately 23 per cent of the families reported expense for this item and averaged $118.03 for the 116 families having such expense. For all families, however, the average was $27.06.

*Motor-cycle supplies and repairs.*—Only 2 families and these in Baltimore, reported an expense for this item, which averaged $19.50 during the year . No purchase was reported.

*Telephone.*—The average annual expenditure for telephone service for all families was $21.16 per family. This convenience was enjoyed by 294, or 58.1 per cent of all the 506 families, and averaged $36.42 a year in such families.

*Laundry.*—Most of the ordinary family wash was done by the housewife. The average cost for laundry work outside of the home was $33.45 for all families. Approximately 67 per cent of the families visited, or 338, reported laundry expense which averaged $50.08 per family.

*Barber and beauty shop.*—This cost was included in practically every family and averaged $20.75 per year for the 506 families. In only five households—two in Baltimore and one in Boston, Chicago, and New Orleans, respectively—was no expense reported for barber work. This service evidently was performed by the wife or some other member of the family in these five homes.

*Tobacco.*—Considering all the families, the cost of tobacco averaged $26.71 for the year. The average cost for the 380, or 75.1 per cent, of all families purchasing the article, was $35.56.

*Papers, magazines, and books.*—All expenses for general reading material for the family are included under this classification, as well as school books for children and other books purchased for educational purposes. Only four families (two in Baltimore and one each in Chicago and New Orleans) reported no expenditure for this item, which averaged $22.03 per year for all families, and $22.21 per year for the 502 families reporting such expense.

*Radio.*—Expense for a radio was reported by 193 families, or 38.1 per cent of all the families visited. The cost of this device averaged $15.17 for all families and $39.78 for the families having such expense. The radio expense was lowest in New Orleans, averaging $5.55 for all families, and highest in Chicago, averaging $26.60 for all families.

*Motion pictures and other amusements.*—Motion-picture shows, excursions, and other forms of entertainment cost $36.23 per annum for the 479 families reporting this expenditure. The annual amount spent for all families averaged $34.29, ranging from $23.14 per family in Boston to $45.34 per family in New Orleans.

*Vacation.*—For vacation expenses, including transportation and all expenses, such as board and lodging, while away for rest or pleasure more than a day, the average family outlay (all families combined) was $24. Only 153, however, or 30.2 per cent of all families visited, reported an expenditure for vacation, which averaged $79.37 in such families.

*Household incidentals.*—Under this head were included cleaning supplies and toilet articles principally, although some families included in this item the amounts spent for postage and stationery. For all families the average spent for this item was $34.09.

*Music, dancing, and elocution lessons.*—The expense for music lessons constituted the major portion of this item. For all families the average was $3.89. This expenditure was found in all cities, but included more families in Boston than in any other city. Considering all cities, music, dancing, and elocution lessons averaged $51.74 for the few families (38) having such expense.

*School tuition and tutors' fees.*—In New Orleans more families reported an expense for this item than in any other city and averaged $48.55 for these 19 families, or $8.78 for all families. In Chicago 14 families averaged $74.07 for school tuition and turors' fees, while the 11 families in Boston having this expense averaged $234.64. Considering all cities this item averaged $102.37 for the 64 families reporting, or $12.95 for all families.

*Servant hire.*—In New Orleans only 11 families reported an expenditure for this item, averaging $195.41, or $20.47 for all families. Although all cities reported servant hire, the number of families employing servants was small in each city. For all cities combined, 29 families reported an average of $172.84 for this service, or an average of $9.91 for all families.

*Gifts, outside the home.*—Considering the five cities, 229 families reported an expense for gifts, which averaged $39.96 per family, or $18.09 for all families.

*Charity.*—The amount contributed to charity was small for all families in each of the five cities. In New York it was lowest, averaging 94 cents, and in New Orleans it was highest, averaging $6.81 for all families. In all cities the average amount contributed

to charity was $2.73, or $15.87 for the 87 families making such contributions.

*Garage rent.*—Whenever a rent contract covered both house and garage no attempt was made to segregate the items. Garage rent reported under this item includes only the families having a separate rental contract for a garage. In the five cities 29 families had this expense, which averaged $82.76 per family, or $4.74 for all families. Two families in New Orleans and New York, 5 in Boston, and 10 in Baltimore and Chicago reported garage rent.

*Death expense.*—Eleven families reported funeral expenses, averaging $239.36, or $5.20 as spread over all families.

*Traveling expense.*—Travel cost incurred by members of the family going to friends or relatives on account of illness or death has been entered under this item. Travel expenses for rest or pleasure, as before stated, are included under vacation expense. For all families travel, other than for vacation, averaged $2.49, or $54.81 for the 23 families reporting this expense.

*Moving expense.*—Only 49 families had moving expense averaging $23.12, or $2.24 for all families. In Chicago 19 families moved during the year, averaging $27.21 for these families. In New York only four families had moving expense, which averaged $29.50 for each family.

*Other items.*—Record of items not deemed sufficiently important to tabulate separately are entered under this heading, and include automobile license, dog taxes, interest on loans other than mortgage on home, taxes, and other expenses on property not lived in and from which no income is received, net loss on garden or chickens, garden hose, lawn mower, flowers for the sick, etc. It cost the 506 families an average of $16.50 for this group of items during the year.

In analyzing the cost of miscellaneous expenses for all families the following items, each more than 1 per cent of the total and together composing 94.2 per cent, have been arranged in the order of the percentage they constitute of the total miscellaneous cost.

| | Per cent |
|---|---|
| Health expense[1] | 15.5 |
| Life, accident, and health insurance | 13.1 |
| Street-car fare, etc.[2] | 8.6 |
| Retirement deduction | 7.5 |
| Motion pictures and other amusements | 4.7 |
| Household incidentals | 4.7 |
| Laundry | 4.6 |
| Automobile payments | 3.8 |
| Automobile supplies and repairs | 3.7 |
| Tobacco | 3.7 |
| Church and Sunday school | 3.3 |
| Vacation | 3.3 |
| Papers, magazines, and books[3] | 3.0 |
| Telephone | 2.9 |
| Barber and beauty shop | 2.8 |
| Gifts outside the home | 2.5 |
| Radio | 2.1 |
| School tuition and tutors' fees | 1.8 |
| Servant hire | 1.4 |
| Lodges, clubs, and societies | 1.2 |

[1] Includes doctor, medicine, hospital, nurse, dentist, oculist, glasses, etc.
[2] Includes also bus, ferry, jitney, and suburban commuting fares.
[3] Includes school books.

Considering the 506 families visited in the study, the miscellaneous expenses constituted 30 per cent of their average income; 4.6 per cent for health, 3.9 per cent for life, accident, and health insurance, 2.6 per cent for street-car fare, 2.2 per cent for retirement, 1.4 per cent for motion pictures and other amusements, laundry, and household incidentals, respectively, 1.1 per cent each for automobile payments, automobile supplies and repairs, and tobacco, and 1.0 per cent for church and Sunday school, and vacation expense. Each of the remaining items constituted less than 1 per cent of the income.

TABLE 1.—EXPENDITURES FOR MISCELLANEOUS ITEMS IN ONE YEAR BY 506 FAMILIES OF FEDERAL EMPLOYEES, BY INCOME GROUPS

| Family income group | Number of families | Average persons [1] in family | Average income per family | Average expenditure per family (for all miscellaneous items) |
|---|---|---|---|---|
| Under $1,500 | 47 | 3.99 | $1,324.05 | $335.03 |
| $1,500 and under $1,800 | 58 | 3.84 | 1,666.18 | 497.49 |
| $1,800 and under $2,100 | 83 | 3.95 | 1,953.20 | 576.37 |
| $2,100 and under $2,400 | 70 | 4.11 | 2,225.33 | 648.80 |
| $2,400 and under $2,700 | 91 | 4.24 | 2,530.30 | 746.92 |
| $2,700 and under $3,000 | 52 | 4.10 | 2,835.38 | 812.10 |
| $3,000 and under $3,300 | 43 | 4.28 | 3,134.43 | 950.13 |
| $3,300 and under $3,600 | 30 | 4.29 | 3,469.24 | 1,107.04 |
| $3,600 and over | 32 | 4.61 | 4,320.20 | 1,484.57 |
| All incomes | 506 | 4.12 | 2,433.91 | 730.49 |

| Item and income group | Average expenditure per family | Families having such expense | | |
|---|---|---|---|---|
| | | Number of families | Per cent of all families | Average expenditure per family |
| Health expense: [2] | | | | |
| Under $1,500 | $39.18 | 39 | 83.0 | $47.22 |
| $1,500 and under $1,800 | 85.62 | 58 | 100.0 | 85.62 |
| $1,800 and under $2,100 | 98.38 | 81 | 97.6 | 100.81 |
| $2,100 and under $2,400 | 121.12 | 69 | 98.6 | 122.87 |
| $2,400 and under $2,700 | 111.27 | 90 | 98.9 | 112.51 |
| $2,700 and under $3,000 | 107.98 | 52 | 100.0 | 107.98 |
| $3,000 and under $3,300 | 136.94 | 43 | 100.0 | 136.94 |
| $3,300 and under $3,600 | 142.88 | 30 | 100.0 | 142.88 |
| $3,600 and over | 243.98 | 32 | 100.0 | 243.98 |
| All incomes | 112.99 | 494 | 97.6 | 115.74 |
| Life, accident, and health insurance: | | | | |
| Under $1,500 | 65.89 | 45 | 95.7 | 68.82 |
| $1,500 and under $1,800 | 72.48 | 54 | 93.1 | 77.85 |
| $1,800 and under $2,100 | 86.20 | 80 | 96.4 | 89.43 |
| $2,100 and under $2,400 | 81.05 | 63 | 90.0 | 90.06 |
| $2,400 and under $2,700 | 93.73 | 84 | 92.3 | 101.54 |
| $2,700 and under $3,000 | 97.23 | 47 | 90.4 | 107.57 |
| $3,000 and under $3,300 | 108.25 | 41 | 95.3 | 113.53 |
| $3,300 and under $3,600 | 139.38 | 30 | 100.0 | 139.38 |
| $3,600 and over | 184.77 | 31 | 96.9 | 190.73 |
| All incomes | 95.78 | 475 | 93.9 | 102.03 |
| Retirement deduction: | | | | |
| Under $1,500 | 40.29 | 44 | 93.6 | 43.04 |
| $1,500 and under $1,800 | 50.00 | 57 | 98.3 | 50.88 |
| $1,800 and under $2,100 | 54.31 | 76 | 91.6 | 59.31 |
| $2,100 and under $2,400 | 51.93 | 57 | 81.4 | 63.77 |
| $2,400 and under $2,700 | 54.61 | 71 | 78.0 | 70.00 |
| $2,700 and under $3,000 | 61.36 | 47 | 90.4 | 67.89 |
| $3,000 and under $3,300 | 64.98 | 38 | 88.4 | 73.53 |
| $3,300 and under $3,600 | 56.34 | 24 | 80.0 | 70.42 |
| $3,600 and over | 61.87 | 29 | 90.6 | 68.27 |
| All incomes | 54.47 | 443 | 87.5 | 62.21 |

[1] Excluding boarders, lodgers, and any others not sharing in these expenses.
[2] Includes doctor, medicine, hospital, nurse, dentist, oculist, glasses, etc.

TABLE 1.—EXPENDITURES FOR MISCELLANEOUS ITEMS IN ONE YEAR BY 506 FAMILIES OF FEDERAL EMPLOYEES, BY INCOME GROUPS—Continued

| Item and income group | Average expenditure per family | Families having such expense | | |
|---|---|---|---|---|
| | | Number of families | Per cent of all families | Average expenditure per family |
| **Personal property insurance:** | | | | |
| Under $1,500 | $1.35 | 9 | 19.1 | $7.07 |
| $1,500 and under $1,800 | 1.60 | 13 | 22.4 | 7.14 |
| $1,800 and under $2,100 | 3.55 | 28 | 33.7 | 10.53 |
| $2,100 and under $2,400 | 1.88 | 15 | 21.4 | 8.78 |
| $2,400 and under $2,700 | 2.74 | 26 | 28.6 | 9.60 |
| $2,700 and under $3,000 | 3.57 | 18 | 34.6 | 10.31 |
| $3,000 and under $3,300 | 3.46 | 15 | 34.9 | 9.91 |
| $3,300 and under $3,600 | 4.05 | 9 | 30.0 | 13.50 |
| $3,600 and over | 4.21 | 10 | 31.3 | 13.49 |
| All incomes | 2.81 | 143 | 28.3 | 9.95 |
| **Personal property and poll taxes:** | | | | |
| Under $1,500 | .87 | 24 | 51.1 | 1.70 |
| $1,500 and under $1,800 | 1.11 | 25 | 43.1 | 2.57 |
| $1,800 and under $2,100 | 1.36 | 41 | 49.4 | 2.76 |
| $2,100 and under $2,400 | 1.59 | 31 | 44.3 | 3.59 |
| $2,400 and under $2,700 | 1.19 | 38 | 41.8 | 2.85 |
| $2,700 and under $3,000 | 2.72 | 22 | 42.3 | 6.43 |
| $3,000 and under $3,300 | 1.97 | 18 | 41.9 | 4.71 |
| $3,300 and under $3,600 | 2.23 | 12 | 40.0 | 5.58 |
| $3,600 and over | 3.55 | 15 | 46.9 | 7.57 |
| All incomes | 1.67 | 226 | 44.7 | 3.74 |
| **Church and Sunday school:** | | | | |
| Under $1,500 | 11.67 | 42 | 89.4 | 13.06 |
| $1,500 and under $1,800 | 14.78 | 54 | 93.1 | 15.88 |
| $1,800 and under $2,100 | 19.85 | 71 | 85.5 | 23.21 |
| $2,100 and under $2,400 | 23.20 | 63 | 90.0 | 25.78 |
| $2,400 and under $2,700 | 23.60 | 80 | 87.9 | 26.85 |
| $2,700 and under $3,000 | 27.49 | 50 | 96.2 | 28.59 |
| $3,000 and under $3,300 | 32.32 | 37 | 86.0 | 37.56 |
| $3,300 and under $3,600 | 40.60 | 27 | 90.0 | 45.11 |
| $3,600 and over | 42.34 | 31 | 96.9 | 43.70 |
| All incomes | 24.15 | 455 | 89.9 | 26.85 |
| **Labor organizations:** | | | | |
| Under $1,500 | 1.01 | 10 | 21.3 | 4.75 |
| $1,500 and under $1,800 | 1.42 | 17 | 29.3 | 4.86 |
| $1,800 and under $2,100 | 1.61 | 28 | 33.7 | 4.77 |
| $2,100 and under $2,400 | 1.87 | 26 | 37.1 | 5.03 |
| $2,400 and under $2,700 | 2.01 | 29 | 31.9 | 6.31 |
| $2,700 and under $3,000 | 2.13 | 18 | 34.6 | 6.14 |
| $3,000 and under $3,300 | 2.59 | 18 | 41.9 | 6.19 |
| $3,300 and under $3,600 | 2.45 | 12 | 40.0 | 6.13 |
| $3,600 and over | 2.16 | 13 | 40.6 | 5.32 |
| All incomes | 1.86 | 171 | 33.8 | 5.51 |
| **Lodges, clubs, and societies:** | | | | |
| Under $1,500 | 6.80 | 19 | 40.4 | 16.83 |
| $1,500 and under $1,800 | 6.45 | 23 | 39.7 | 16.27 |
| $1,800 and under $2,100 | 6.16 | 33 | 39.8 | 15.49 |
| $2,100 and under $2,400 | 7.34 | 40 | 57.1 | 12.85 |
| $2,400 and under $2,700 | 8.93 | 52 | 57.1 | 15.63 |
| $2,700 and under $3,000 | 9.35 | 35 | 67.3 | 13.88 |
| $3,000 and under $3,300 | 9.39 | 25 | 58.1 | 16.15 |
| $3,300 and under $3,600 | 12.83 | 20 | 66.7 | 19.25 |
| $3,600 and over | 14.87 | 23 | 71.9 | 20.66 |
| All incomes | 8.46 | 270 | 53.4 | 15.86 |
| **Street-car fare, etc.:** [1] | | | | |
| Under $1,500 | 43.17 | 45 | 95.7 | 45.09 |
| $1,500 and under $1,800 | 47.92 | 57 | 98.3 | 48.76 |
| $1,800 and under $2,100 | 57.44 | 83 | 100.0 | 57.44 |
| $2,100 and under $2,400 | 60.33 | 68 | 97.1 | 62.11 |
| $2,400 and under $2,700 | 66.76 | 88 | 96.7 | 69.03 |
| $2,700 and under $3,000 | 63.07 | 51 | 98.1 | 64.31 |
| $3,000 and under $3,300 | 70.58 | 43 | 100.0 | 70.58 |
| $3,300 and under $3,600 | 89.35 | 30 | 100.0 | 89.35 |
| $3,600 and over | 96.61 | 32 | 100.0 | 96.61 |
| All incomes | 63.16 | 497 | 98.2 | 64.31 |

[1] Includes also bus, ferry, jitney, and suburban commuting fares.

TABLE 1.—EXPENDITURES FOR MISCELLANEOUS ITEMS IN ONE YEAR BY FAMILIES OF FEDERAL EMPLOYEES, BY INCOME GROUPS—Continued 506

| Item and income group | Average expenditure per family | Families having such expense | | |
|---|---|---|---|---|
| | | Number of families | Per cent of all families | Average expenditure per family |
| Automobile payments: | | | | |
| Under $1,500 | $2.66 | 1 | 2.1 | $125.00 |
| $1,500 and under $1,800 | 32.76 | 3 | 5.2 | 633.33 |
| $1,800 and under $2,100 | 11.65 | 4 | 4.8 | 241.81 |
| $2,100 and under $2,400 | 12.22 | 3 | 4.3 | 285.09 |
| $2,400 and under $2,700 | 25.97 | 4 | 4.4 | 590.90 |
| $2,700 and under $3,000 | 22.41 | 7 | 13.5 | 166.48 |
| $3,000 and under $3,300 | 34.65 | 5 | 11.6 | 298.00 |
| $3,300 and under $3,600 | 70.05 | 4 | 13.3 | 525.34 |
| $3,600 and over | 93.75 | 5 | 15.6 | 600.00 |
| All incomes | 27.60 | 36 | 7.1 | 388.00 |
| Automobile supplies and repairs: | | | | |
| Under $1,500 | 6.13 | 4 | 8.5 | 72.04 |
| $1,500 and under $1,800 | 11.45 | 7 | 12.1 | 94.86 |
| $1,800 and under $2,100 | 25.01 | 19 | 22.9 | 109.25 |
| $2,100 and under $2,400 | 12.42 | 10 | 14.3 | 86.95 |
| $2,400 and under $2,700 | 31.76 | 21 | 23.1 | 137.64 |
| $2,700 and under $3,000 | 33.69 | 18 | 34.6 | 97.33 |
| $3,000 and under $3,300 | 33.64 | 12 | 27.9 | 120.55 |
| $3,300 and under $3,600 | 53.10 | 13 | 43.3 | 122.54 |
| $3,600 and over | 66.00 | 12 | 37.5 | 176.00 |
| All incomes | 27.06 | 116 | 22.9 | 118.03 |
| Motorcycle supplies and repairs: | | | | |
| Under $1,500 | .19 | 1 | 2.1 | 9.00 |
| $1,800 and under $2,100 | .36 | 1 | 1.2 | 30.00 |
| All incomes | .08 | 2 | .4 | 19.50 |
| Telephone: | | | | |
| Under $1,500 | 3.64 | 9 | 19.1 | 18.99 |
| $1,500 and under $1,800 | 8.77 | 18 | 31.0 | 28.27 |
| $1,800 and under $2,100 | 13.64 | 38 | 45.8 | 29.79 |
| $2,100 and under $2,400 | 20.93 | 39 | 55.7 | 37.57 |
| $2,400 and under $2,700 | 26.38 | 64 | 70.3 | 37.51 |
| $2,700 and under $3,000 | 26.11 | 36 | 69.2 | 37.71 |
| $3,000 and under $3,300 | 37.55 | 37 | 86.0 | 43.64 |
| $3,300 and under $3,600 | 29.97 | 23 | 76.7 | 39.09 |
| $3,600 and over | 36.23 | 30 | 93.8 | 38.65 |
| All incomes | 21.16 | 294 | 58.1 | 36.42 |
| Laundry: | | | | |
| Under $1,500 | 10.52 | 20 | 42.6 | 24.73 |
| $1,500 and under $1,800 | 15.47 | 34 | 58.6 | 26.39 |
| $1,800 and under $2,100 | 23.08 | 50 | 60.2 | 38.32 |
| $2,100 and under $2,400 | 34.65 | 50 | 71.4 | 48.51 |
| $2,400 and under $2,700 | 38.41 | 68 | 74.7 | 51.40 |
| $2,700 and under $3,000 | 47.90 | 39 | 75.0 | 63.87 |
| $3,000 and under $3,300 | 45.46 | 31 | 72.1 | 63.05 |
| $3,300 and under $3,600 | 46.47 | 24 | 80.0 | 58.09 |
| $3,600 and over | 58.14 | 22 | 68.8 | 84.56 |
| All incomes | 33.45 | 338 | 66.8 | 50.08 |
| Barber and beauty shop: | | | | |
| Under $1,500 | 12.54 | 47 | 100.0 | 12.54 |
| $1,500 and under $1,800 | 15.82 | 57 | 98.3 | 16.10 |
| $1,800 and under $2,100 | 17.81 | 82 | 98.8 | 18.02 |
| $2,100 and under $2,400 | 19.43 | 70 | 100.0 | 19.43 |
| $2,400 and under $2,700 | 24.11 | 89 | 97.8 | 24.65 |
| $2,700 and under $3,000 | 22.03 | 51 | 98.1 | 22.46 |
| $3,000 and under $3,300 | 22.98 | 43 | 100.0 | 22.98 |
| $3,300 and under $3,600 | 24.20 | 30 | 100.0 | 24.20 |
| $3,600 and over | 34.41 | 32 | 100.0 | 34.41 |
| All incomes | 20.75 | 501 | 99.0 | 20.96 |

TABLE 1.—EXPENDITURES FOR MISCELLANEOUS ITEMS IN ONE YEAR BY 506 FAMILIES OF FEDERAL EMPLOYEES, BY INCOME GROUPS—Continued

| Item and income group | Average expenditure per family | Families having such expense | | |
|---|---|---|---|---|
| | | Number of families | Per cent of all families | Average expenditure per family |
| Tobacco: | | | | |
| Under $1,500 | $18.06 | 30 | 63.8 | $28.30 |
| $1,500 and under $1,800 | 25.64 | 45 | 77.6 | 33.04 |
| $1,800 and under $2,100 | 27.64 | 62 | 74.7 | 37.00 |
| $2,100 and under $2,400 | 29.14 | 59 | 84.3 | 34.57 |
| $2,400 and under $2,700 | 25.00 | 67 | 73.6 | 33.96 |
| $2,700 and under $3,000 | 34.05 | 41 | 78.8 | 43.18 |
| $3,000 and under $3,300 | 25.40 | 32 | 74.4 | 34.13 |
| $3,300 and under $3,600 | 23.96 | 20 | 66.7 | 35.94 |
| $3,600 and over | 30.83 | 24 | 75.0 | 41.10 |
| All incomes | 26.71 | 380 | 75.1 | 35.56 |
| Papers, magazines, and books:[1] | | | | |
| Under $1,500 | 11.14 | 45 | 95.7 | 11.63 |
| $1,500 and under $1,800 | 15.33 | 58 | 100.0 | 15.33 |
| $1,800 and under $2,100 | 18.83 | 82 | 98.8 | 19.06 |
| $2,100 and under $2,400 | 19.96 | 70 | 100.0 | 19.96 |
| $2,400 and under $2,700 | 25.03 | 91 | 100.0 | 25.03 |
| $2,700 and under $3,000 | 26.54 | 52 | 100.0 | 26.54 |
| $3,000 and under $3,300 | 22.93 | 42 | 97.7 | 23.47 |
| $3,300 and under $3,600 | 33.20 | 30 | 100.0 | 33.20 |
| $3,600 and over | 35.54 | 32 | 100.0 | 35.54 |
| All incomes | 22.03 | 502 | 99.2 | 22.21 |
| Radio: | | | | |
| Under $1,500 | 2.43 | 3 | 6.4 | 38.00 |
| $1,500 and under $1,800 | 6.74 | 16 | 27.6 | 24.44 |
| $1,800 and under $2,100 | 5.88 | 22 | 26.5 | 22.18 |
| $2,100 and under $2,400 | 18.51 | 32 | 45.7 | 40.49 |
| $2,400 and under $2,700 | 16.35 | 39 | 42.9 | 38.15 |
| $2,700 and under $3,000 | 13.85 | 22 | 42.3 | 32.73 |
| $3,000 and under $3,300 | 15.09 | 22 | 51.2 | 29.50 |
| $3,300 and under $3,600 | 45.23 | 18 | 60.0 | 75.39 |
| $3,600 and over | 36.72 | 19 | 59.4 | 61.84 |
| All incomes | 15.17 | 193 | 38.1 | 39.78 |
| Motion pictures and other amusements: | | | | |
| Under $1,500 | 11.87 | 42 | 89.4 | 13.28 |
| $1,500 and under $1,800 | 20.07 | 53 | 91.4 | 21.96 |
| $1,800 and under $2,100 | 25.21 | 75 | 90.4 | 27.90 |
| $2,100 and under $2,400 | 30.69 | 67 | 95.7 | 32.06 |
| $2,400 and under $2,700 | 37.53 | 88 | 96.7 | 38.81 |
| $2,700 and under $3,000 | 44.21 | 49 | 94.2 | 46.92 |
| $3,000 and under $3,300 | 37.07 | 43 | 100.0 | 37.07 |
| $3,300 and under $3,600 | 53.13 | 30 | 100.0 | 53.13 |
| $3,600 and over | 77.75 | 32 | 100.0 | 77.75 |
| All incomes | 34.29 | 479 | 94.7 | 36.23 |
| Vacation: | | | | |
| Under $1,500 | 2.50 | 8 | 17.0 | 14.71 |
| $1,500 and under $1,800 | 7.13 | 13 | 22.4 | 31.82 |
| $1,800 and under $2,100 | 9.31 | 16 | 19.3 | 48.30 |
| $2,100 and under $2,400 | 13.64 | 15 | 21.4 | 63.64 |
| $2,400 and under $2,700 | 27.38 | 28 | 30.8 | 88.99 |
| $2,700 and under $3,000 | 42.63 | 23 | 44.2 | 96.37 |
| $3,000 and under $3,300 | 47.20 | 19 | 44.2 | 106.83 |
| $3,300 and under $3,600 | 53.42 | 15 | 50.0 | 106.84 |
| $3,600 and over | 48.25 | 16 | 50.0 | 96.50 |
| All incomes | 24.00 | 153 | 30.2 | 79.37 |

[1] Includes school books.

TABLE 1.—EXPENDITURES FOR MISCELLANEOUS ITEMS IN ONE YEAR BY FAMILIES OF FEDERAL EMPLOYEES, BY INCOME GROUPS—Continued 506

| Item and income group | Average expenditure per family | Families having such expense | | |
|---|---|---|---|---|
| | | Number of families | Per cent of all families | Average expenditure per family |
| **Household incidentals:** | | | | |
| Under $1,500 | $23.02 | 47 | 100.0 | $23.02 |
| $1,500 and under $1,800 | 25.90 | 58 | 100.0 | 25.90 |
| $1,800 and under $2,100 | 31.04 | 83 | 100.0 | 31.04 |
| $2,100 and under $2,400 | 33.43 | 70 | 100.0 | 33.43 |
| $2,400 and under $2,700 | 35.92 | 91 | 100.0 | 35.92 |
| $2,700 and under $3,000 | 40.03 | 52 | 100.0 | 40.03 |
| $3,000 and under $3,300 | 38.56 | 43 | 100.0 | 38.56 |
| $3,300 and under $3,600 | 41.49 | 30 | 100.0 | 41.49 |
| $3,600 and over | 46.70 | 32 | 100.0 | 46.70 |
| All incomes | 34.09 | 506 | 100.0 | 34.09 |
| **Music, dancing, and elocution lessons:** | | | | |
| $1,800 and under $2,100 | 3.65 | 6 | 7.2 | 50.50 |
| $2,100 and under $2,400 | 2.89 | 4 | 5.7 | 50.50 |
| $2,400 and under $2,700 | 3.95 | 10 | 11.0 | 35.99 |
| $2,700 and under $3,000 | 9.50 | 8 | 15.4 | 61.78 |
| $3,000 and under $3,300 | 10.09 | 6 | 14.0 | 72.33 |
| $3,300 and under $3,600 | 2.37 | 2 | 6.7 | 35.50 |
| $3,600 and over | 3.19 | 2 | 6.3 | 51.00 |
| All incomes | 3.89 | 38 | 7.5 | 51.74 |
| **School tuition and tutors fees:** | | | | |
| Under $1,500 | 1.36 | 5 | 10.6 | 12.78 |
| $1,500 and under $1,800 | 1.00 | 3 | 5.2 | 19.33 |
| $1,800 and under $2,100 | 4.32 | 8 | 9.6 | 44.85 |
| $2,100 and under $2,400 | 5.87 | 8 | 11.4 | 51.33 |
| $2,400 and under $2,700 | 10.71 | 9 | 9.9 | 108.28 |
| $2,700 and under $3,000 | 16.14 | 9 | 17.3 | 93.28 |
| $3,000 and under $3,300 | 17.12 | 7 | 16.3 | 105.16 |
| $3,300 and under $3,600 | 31.00 | 6 | 20.0 | 155.00 |
| $3,600 and over | 68.13 | 9 | 28.1 | 242.22 |
| All incomes | 12.95 | 64 | 12.6 | 102.37 |
| **Servant hire:** | | | | |
| $1,500 and under $1,800 | 7.08 | 3 | 5.2 | 136.83 |
| $2,100 and under $2,400 | 3.39 | 3 | 4.3 | 79.00 |
| $2,400 and under $2,700 | 10.56 | 6 | 6.6 | 160.17 |
| $2,700 and under $3,000 | 11.94 | 4 | 7.7 | 155.25 |
| $3,000 and under $3,300 | 21.65 | 6 | 14.0 | 155.17 |
| $3,300 and under $3,600 | 22.20 | 3 | 10.0 | 222.00 |
| $3,600 and over | 37.06 | 4 | 12.5 | 296.50 |
| All incomes | 9.91 | 29 | 5.7 | 172.84 |
| **Gifts outside the home:** | | | | |
| Under $1,500 | 2.80 | 8 | 17.0 | 16.44 |
| $1,500 and under $1,800 | 6.36 | 17 | 29.3 | 21.71 |
| $1,800 and under $2,100 | 6.87 | 29 | 34.9 | 19.66 |
| $2,100 and under $2,400 | 10.11 | 25 | 35.7 | 28.32 |
| $2,400 and under $2,700 | 15.50 | 40 | 44.0 | 35.26 |
| $2,700 and under $3,000 | 19.37 | 37 | 71.2 | 27.22 |
| $3,000 and under $3,300 | 26.14 | 26 | 60.5 | 43.23 |
| $3,300 and under $3,600 | 38.63 | 24 | 80.0 | 48.29 |
| $3,600 and over | 83.53 | 23 | 71.9 | 116.22 |
| All incomes | 18.09 | 229 | 45.3 | 39.96 |
| **Charity:** | | | | |
| Under $1,500 | .30 | 3 | 6.4 | 4.67 |
| $1,500 and under $1,800 | 1.54 | 9 | 15.5 | 9.93 |
| $1,800 and under $2,100 | .97 | 11 | 13.3 | 7.31 |
| $2,100 and under $2,400 | 1.56 | 9 | 12.9 | 12.13 |
| $2,400 and under $2,700 | 1.58 | 13 | 14.3 | 11.08 |
| $2,700 and under $3,000 | 2.00 | 13 | 25.0 | 8.00 |
| $3,000 and under $3,300 | 2.00 | 8 | 18.6 | 10.75 |
| $3,300 and under $3,600 | 6.28 | 13 | 43.3 | 14.50 |
| $3,600 and over | 17.66 | 8 | 25.0 | 70.63 |
| All incomes | 2.73 | 87 | 17.2 | 15.87 |

TABLE 1.—EXPENDITURES FOR MISCELLANEOUS ITEMS IN ONE YEAR BY 506 FAMILIES OF FEDERAL EMPLOYEES, BY INCOME GROUPS—Continued

| Item and income group | Average expenditure per family | Families having such expense | | |
|---|---|---|---|---|
| | | Number of families | Per cent of all families | Average expenditure per family |
| Garage rent: | | | | |
| Under $1,500 | $2.81 | 2 | 4.3 | $66.00 |
| $1,500 and under $1,800 | 1.24 | 1 | 1.7 | 72.00 |
| $1,800 and under $2,100 | 2.89 | 3 | 3.6 | 80.00 |
| $2,100 and under $2,400 | 4.11 | 3 | 4.3 | 96.00 |
| $2,400 and under $2,700 | 5.08 | 6 | 6.6 | 77.00 |
| $2,700 and under $3,000 | 1.12 | 2 | 3.8 | 29.00 |
| $3,000 and under $3,300 | 7.12 | 4 | 9.3 | 76.50 |
| $3,300 and under $3,600 | 16.87 | 5 | 16.7 | 101.20 |
| $3,600 and over | 10.50 | 3 | 9.4 | 112.00 |
| All incomes | 4.74 | 29 | 5.7 | 82.76 |
| Death expense: | | | | |
| Under $1,500 | 8.19 | 2 | 4.3 | 192.50 |
| $1,800 and under $2,100 | 1.81 | 1 | 1.2 | 150.00 |
| $2,100 and under $2,400 | 5.14 | 2 | 2.9 | 180.00 |
| $2,400 and under $2,700 | 2.58 | 1 | 1.1 | 235.00 |
| $3,000 and under $3,300 | 23.33 | 4 | 9.3 | 250.75 |
| $3,600 and over | 15.63 | 1 | 3.1 | 500.00 |
| All incomes | 5.20 | 11 | 2.2 | 239.36 |
| Traveling expense: | | | | |
| Under $1,500 | 1.06 | 1 | 2.1 | 50.00 |
| $1,500 and under $1,800 | 1.03 | 1 | 1.7 | 60.00 |
| $1,800 and under $2,100 | 4.30 | 5 | 6.0 | 71.40 |
| $2,100 and under $2,400 | 3.20 | 5 | 7.1 | 44.86 |
| $2,400 and under $2,700 | 1.33 | 4 | 4.4 | 30.25 |
| $2,700 and under $3,000 | 5.11 | 4 | 7.7 | 66.44 |
| $3,000 and under $3,300 | 1.51 | 1 | 2.3 | 65.00 |
| $3,300 and under $3,600 | 2.67 | 1 | 3.3 | 80.00 |
| $3,600 and over | 1.17 | 1 | 3.1 | 37.50 |
| All incomes | 2.49 | 23 | 4.5 | 54.81 |
| Moving expense: | | | | |
| Under $1,500 | .66 | 4 | 8.5 | 7.75 |
| $1,500 and under $1,800 | 2.00 | 6 | 10.3 | 19.33 |
| $1,800 and under $2,100 | 1.40 | 7 | 8.4 | 16.57 |
| $2,100 and under $2,400 | 2.33 | 8 | 11.4 | 20.38 |
| $2,400 and under $2,700 | 2.34 | 10 | 11.0 | 21.25 |
| $2,700 and under $3,000 | 1.73 | 4 | 7.7 | 22.50 |
| $3,000 and under $3,300 | 3.23 | 3 | 7.0 | 46.33 |
| $3,300 and under $3,600 | 3.85 | 4 | 13.3 | 28.88 |
| $3,600 and over | 4.69 | 3 | 9.4 | 50.00 |
| All incomes | 2.24 | 49 | 9.7 | 23.12 |
| Other items: [5] | | | | |
| Under $1,500 | 2.91 | 10 | 21.3 | 13.68 |
| $1,500 and under $1,800 | 10.77 | 17 | 29.3 | 36.75 |
| $1,800 and under $2,100 | 11.84 | 27 | 32.5 | 36.39 |
| $2,100 and under $2,400 | 14.86 | 25 | 35.7 | 41.61 |
| $2,400 and under $2,700 | 14.60 | 31 | 34.1 | 42.86 |
| $2,700 and under $3,000 | 16.86 | 27 | 51.9 | 32.46 |
| $3,000 and under $3,300 | 46.93 | 22 | 51.2 | 91.72 |
| $3,300 and under $3,600 | 18.84 | 11 | 36.7 | 51.37 |
| $3,600 and over | 24.34 | 15 | 46.9 | 51.93 |
| All incomes | 16.50 | 185 | 36.6 | 45.14 |

[5] Includes automobile license, dog taxes, interest on loans other than mortgage on home, taxes, and other expense on property not lived in and from which no income is received, net loss on garden or chickens, etc.

Table 2 shows the expenditures for each of the miscellaneous items by all the 506 families, by cities, all income groups combined.

TABLE 2.—EXPENDITURES FOR MISCELLANEOUS ITEMS IN ONE YEAR BY 506 FAMILIES OF FEDERAL EMPLOYEES, BY CITIES

*Baltimore*

[Total number of families, 96; average persons [1] in family, 4.08; average income per family, $2,336.87]

| Item | Average expenditure per family | Families having such expense | | |
|---|---|---|---|---|
| | | Number of families | Per cent of all families | Average expenditure per family |
| Health expense [2] | $75.50 | 95 | 99.0 | $76.29 |
| Life, accident, and health insurance | 96.30 | 91 | 94.8 | 101.59 |
| Retirement deduction | 52.23 | 81 | 84.4 | 61.90 |
| Personal property insurance | 2.76 | 35 | 36.5 | 7.56 |
| Personal property and poll taxes | 1.50 | 18 | 18.8 | 7.99 |
| Church and Sunday school | 20.75 | 84 | 87.5 | 23.72 |
| Labor organizations | 1.64 | 39 | 40.6 | 4.03 |
| Lodges, clubs, and societies | 6.83 | 47 | 49.0 | 13.96 |
| Street-car fare, etc. [3] | 55.96 | 94 | 97.9 | 57.15 |
| Automobile payments | 24.82 | 8 | 8.3 | 297.83 |
| Automobile supplies and repairs | 32.10 | 26 | 27.1 | 118.53 |
| Motor-cycle supplies and repairs | .41 | 2 | 2.1 | 19.50 |
| Telephone | 15.72 | 45 | 46.9 | 33.54 |
| Laundry | 25.10 | 53 | 55.2 | 45.46 |
| Barber and beauty shop | 20.64 | 94 | 97.9 | 21.08 |
| Tobacco | 27.07 | 69 | 71.9 | 37.66 |
| Papers, magazines, and books [4] | 17.93 | 94 | 97.9 | 18.31 |
| Radio | 19.79 | 35 | 36.5 | 54.29 |
| Motion pictures and other amusements | 25.65 | 92 | 95.8 | 26.77 |
| Vacation | 16.42 | 25 | 26.0 | 63.06 |
| Household incidentals | 27.97 | 96 | 100.0 | 27.97 |
| Music, dancing, and elocution lessons | 3.67 | 6 | 6.3 | 58.67 |
| School tuition and tutors' fees | 6.90 | 9 | 9.4 | 73.58 |
| Servant hire | 13.53 | 9 | 9.4 | 144.33 |
| Gifts, outside the home | 18.43 | 29 | 30.2 | 61.00 |
| Charity | 2.44 | 7 | 7.3 | 33.43 |
| Garage rent | 6.89 | 10 | 10.4 | 6.61 |
| Death expense | 5.47 | 2 | 2.1 | 262.50 |
| Traveling expense | 5.33 | 7 | 7.3 | 73.11 |
| Moving expense | 1.97 | 8 | 8.3 | 23.69 |
| Other items [5] | 11.50 | 37 | 38.5 | 29.91 |
| Total | 643.22 | | | |

*Boston*

[Total number of families, 102; average persons [1] in family, 4.07; average income per family, $2,411.31]

| | | | | |
|---|---|---|---|---|
| Health expense [2] | $121.68 | 101 | 99.0 | $122.89 |
| Life, accident, and health insurance | 94.92 | 97 | 95.1 | 99.82 |
| Retirement deduction | 54.99 | 89 | 87.3 | 63.02 |
| Personal property insurance | 1.88 | 24 | 23.5 | 8.00 |
| Personal property and poll taxes | 2.82 | 101 | 99.0 | 2.85 |
| Church and Sunday school | 33.66 | 101 | 99.0 | 33.99 |
| Labor organizations | 2.13 | 42 | 41.2 | 5.18 |
| Lodges, clubs, and societies | 7.46 | 49 | 48.0 | 15.53 |
| Street-car fares, etc. [3] | 75.69 | 99 | 97.1 | 77.99 |
| Automobile payments | 9.79 | 4 | 3.9 | 249.75 |
| Automobile supplies and repairs | 17.88 | 19 | 18.6 | 95.99 |
| Telephone | 23.57 | 60 | 58.8 | 40.07 |
| Laundry | 22.12 | 67 | 65.7 | 33.68 |
| Barber and beauty shop | 19.04 | 101 | 99.0 | 19.23 |
| Tobacco | 23.01 | 78 | 76.5 | 30.09 |
| Papers, magazines, and books [4] | 22.66 | 102 | 100.0 | 22.66 |
| Radio | 6.13 | 47 | 46.1 | 13.30 |
| Motion pictures and other amusements | 23.14 | 93 | 91.2 | 25.38 |
| Vacation | 21.25 | 32 | 31.4 | 67.74 |
| Household incidentals | 27.41 | 102 | 100.0 | 27.41 |
| Music, dancing, and elocution lessons | 5.53 | 14 | 13.7 | 40.28 |
| School tuition and tutors' fees | 25.30 | 11 | 10.8 | 234.64 |
| Servant hire | 2.67 | 3 | 2.9 | 90.67 |

[1] Excluding boarders, lodgers, and others not sharing in these expenses.
[2] Includes doctor, medicine, hospital, nurse, dentist, oculist, glasses, etc.
[3] Includes also bus, ferry, jitney, and suburban commuting fares.
[4] Includes school books.
[5] Includes automobile license, dog taxes, interest on loans other than mortgage on home, taxes, and other expenses on property not lived in and from which no income is received, net loss on garden or chickens, etc.

TABLE 2.—EXPENDITURES FOR MISCELLANEOUS ITEMS IN ONE YEAR BY 506 FAMILIES OF FEDERAL EMPLOYEES, BY CITIES—Continued

*Boston*—Continued

| Item | Average expenditure per family | Families having such expense | | |
|---|---|---|---|---|
| | | Number of families | Per cent of all families | Average expenditure per family |
| Gifts, outside the home | $9.57 | 43 | 42.2 | $22.71 |
| Charity | 1.60 | 16 | 15.7 | 10.19 |
| Garage rent | 5.00 | 5 | 4.9 | 102.00 |
| Death expense | 1.23 | 1 | 1.0 | 125.00 |
| Traveling expense | 1.49 | 4 | 3.9 | 38.00 |
| Moving expense | 1.29 | 6 | 5.9 | 22.00 |
| Other items [5] | 11.84 | 31 | 30.4 | 38.84 |
| Total | 676.75 | | | |

*Chicago*

[Total number of families, 102; average persons [1] in family, 4.18; average income per family, $2,745.87]

| | | | | |
|---|---|---|---|---|
| Health expense [2] | $138.91 | 102 | 100.0 | $138.91 |
| Life, accident, and health insurance | 107.89 | 95 | 93.1 | 115.84 |
| Retirement deduction | 56.14 | 87 | 85.3 | 65.82 |
| Personal property insurance | 1.96 | 22 | 21.6 | 9.11 |
| Personal property and poll taxes | 1.35 | 12 | 11.8 | 11.49 |
| Church and Sunday school | 24.58 | 81 | 79.4 | 30.95 |
| Labor organizations | 2.24 | 37 | 36.3 | 6.19 |
| Lodges, clubs, and societies | 8.73 | 62 | 60.8 | 14.36 |
| Street-car fare, etc. [3] | 76.29 | 102 | 100.0 | 76.29 |
| Automobile payments | 61.30 | 13 | 12.7 | 480.95 |
| Automobile supplies and repairs | 40.25 | 34 | 33.3 | 120.75 |
| Telephone | 25.86 | 80 | 78.4 | 32.97 |
| Laundry | 31.70 | 63 | 61.8 | 51.32 |
| Barber and beauty shop | 23.72 | 101 | 99.0 | 23.96 |
| Tobacco | 25.46 | 77 | 75.5 | 33.72 |
| Papers, magazines, and books [4] | 26.65 | 101 | 99.0 | 26.91 |
| Radio | 26.60 | 50 | 49.0 | 54.26 |
| Motion pictures and other amusements | 37.40 | 97 | 95.1 | 39.33 |
| Vacation | 25.09 | 37 | 36.3 | 69.17 |
| Household incidentals | 38.95 | 102 | 100.0 | 38.95 |
| Music, dancing, and elocution lessons | 4.56 | 8 | 7.8 | 58.16 |
| School tuition and tutors' fees | 10.17 | 14 | 13.7 | 74.07 |
| Servant hire | 8.67 | 4 | 3.9 | 221.00 |
| Gifts, outside the home | 23.48 | 50 | 49.0 | 47.90 |
| Charity | 1.70 | 23 | 22.5 | 7.56 |
| Garage rent | 7.95 | 10 | 9.8 | 81.10 |
| Death expense | 10.10 | 3 | 2.9 | 343.33 |
| Traveling expense | 3.65 | 5 | 4.9 | 74.45 |
| Moving expense | 5.07 | 19 | 18.6 | 27.21 |
| Other items [5] | 40.28 | 48 | 47.1 | 85.60 |
| Total | 896.70 | | | |

*New Orleans*

[Total number of families, 105; average persons [1] in family, 4.02; average income per family, $2,193.98]

| | | | | |
|---|---|---|---|---|
| Health expense [2] | $99.24 | 100 | 95.2 | $104.21 |
| Life, accident, and health insurance | 74.48 | 97 | 92.4 | 80.62 |
| Retirement deduction | 54.15 | 97 | 92.4 | 58.61 |
| Personal property insurance | 5.04 | 34 | 32.4 | 15.58 |
| Personal property and poll taxes | 2.62 | 95 | 90.5 | 2.90 |
| Church and Sunday school | 18.24 | 101 | 96.2 | 18.96 |
| Labor organizations | 1.92 | 30 | 28.6 | 6.71 |
| Lodges, clubs, and societies | 10.07 | 56 | 53.3 | 18.89 |

[1] Excluding boarders, lodgers, and others not sharing in these expenses.
[2] Includes doctor, medicine, hospital, nurse, dentist, oculist, glasses, etc.
[3] Includes also bus, ferry, jitney, and suburban commuting fares.
[4] Includes school books.
[5] Includes automobile license, dog taxes, interest on loans other than mortgage on home, taxes, and other expenses on property not lived in and from which no income is received, net loss on garden or chickens, etc.

TABLE 2.—EXPENDITURES FOR MISCELLANEOUS ITEMS IN ONE YEAR BY 506 FAMILIES OF FEDERAL EMPLOYEES, BY CITIES—Continued

## *New Orleans*—Continued

| Item | Average expenditure per family | Families having such expense | | |
|---|---|---|---|---|
| | | Number of families | Per cent of all families | Average expenditure per family |
| Street-car fare, etc.[3] | $53.97 | 101 | 96.2 | $56.10 |
| Automobile payments | 31.75 | 9 | 8.6 | 370.43 |
| Automobile supplies and repairs | 38.64 | 31 | 29.5 | 130.87 |
| Telephone | 22.17 | 56 | 53.3 | 41.57 |
| Laundry | 48.43 | 74 | 70.5 | 68.72 |
| Barber and beauty shop | 18.40 | 104 | 99.0 | 18.57 |
| Tobacco | 28.15 | 72 | 68.6 | 41.05 |
| Papers, magazines, and books[4] | 21.10 | 104 | 99.0 | 21.30 |
| Radio | 5.55 | 19 | 18.1 | 30.69 |
| Motion pictures and other amusements | 45.34 | 102 | 97.1 | 46.68 |
| Vacation | 20.21 | 29 | 27.6 | 73.19 |
| Household incidentals | 39.63 | 105 | 100.0 | 39.63 |
| Music, dancing, and elocution lessons | 2.73 | 5 | 4.8 | 57.40 |
| School tuition and tutors' fees | 8.78 | 19 | 18.1 | 48.55 |
| Servant hire | 20.47 | 11 | 10.5 | 195.41 |
| Gifts outside the home | 19.54 | 60 | 57.1 | 34.20 |
| Charity | 6.81 | 37 | 35.2 | 19.31 |
| Garage rent | .63 | 2 | 1.9 | 33.00 |
| Death expense | 4.60 | 3 | 2.9 | 161.00 |
| Traveling expense | 1.26 | 3 | 2.9 | 44.03 |
| Moving expense | 1.68 | 12 | 11.4 | 14.71 |
| Other items[5] | 13.22 | 47 | 44.8 | 29.54 |
| Total | 718.82 | | | |

## *New York City*

[Total number of families, 101; average persons[1] in family, 4.26; average income per family, $2,483.36]

| | | | | |
|---|---|---|---|---|
| Health expense[2] | $127.98 | 96 | 95.0 | $134.65 |
| Life, accident, and health insurance | 106.05 | 95 | 94.1 | 112.75 |
| Retirement deduction | 54.72 | 89 | 88.1 | 62.10 |
| Personal property insurance | 2.34 | 28 | 27.7 | 8.44 |
| Personal property and poll taxes | | | | |
| Church and Sunday school | 23.47 | 88 | 87.1 | 26.94 |
| Labor organizations | 1.36 | 23 | 22.8 | 5.98 |
| Lodges, clubs, and societies | 9.08 | 56 | 55.4 | 16.38 |
| Street-car fare, etc.[3] | 53.66 | 101 | 100.0 | 53.66 |
| Automobile payments | 9.90 | 2 | 2.0 | 500.00 |
| Automobile supplies and repairs | 6.17 | 6 | 5.9 | 103.83 |
| Telephone | 18.11 | 53 | 52.5 | 34.52 |
| Laundry | 39.04 | 81 | 80.2 | 48.68 |
| Barber and beauty shop | 22.03 | 101 | 100.0 | 22.03 |
| Tobacco | 29.85 | 84 | 83.2 | 35.89 |
| Papers, magazines, and books[4] | 21.61 | 101 | 100.0 | 21.61 |
| Radio | 18.38 | 42 | 41.6 | 44.60 |
| Motion pictures and other amusements | 39.15 | 95 | 94.1 | 41.62 |
| Vacation | 36.81 | 30 | 29.7 | 123.92 |
| Household incidentals | 35.96 | 101 | 100.0 | 35.96 |
| Music, dancing, and elocution lessons | 2.95 | 5 | 5.0 | 59.60 |
| School tuition and tutors' fees | 13.35 | 11 | 10.9 | 122.62 |
| Servant hire | 4.04 | 2 | 2.0 | 204.00 |
| Gifts outside the home | 19.40 | 47 | 46.5 | 41.69 |
| Charity | .94 | 4 | 4.0 | 23.75 |
| Garage rent | 3.49 | 2 | 2.0 | 176.00 |
| Death expense | 4.65 | 2 | 2.0 | 235.00 |
| Traveling expense | .92 | 4 | 4.0 | 23.13 |
| Moving expense | 1.17 | 4 | 4.0 | 29.50 |
| Other items[5] | 5.38 | 22 | 21.8 | 24.70 |
| Total | 711.96 | | | |

[1] Excluding boarders, lodgers, and others not sharing in these expenses.
[2] Includes doctor, medicine, hospital, nurse, dentist, oculist, glasses, etc.
[3] Includes also bus, ferry, jitney, and suburban commuting fares.
[4] Includes school books.
[5] Includes automobile license, dog taxes, interest on loans other than mortgage on home, taxes, and other expenses on property not lived in and from which no income is received, net loss on garden or chickens, etc.

## Working Women's Cost-of-Living Budget in Toronto

THE lowest wage upon which an independent woman worker in Toronto can support herself is $653 per annum, according to the October, 1928, revision of the cost-of-living budget for such a worker, published in the eighth annual report of the Ontario Minimum Wage Board. The details of the budget for October, 1928, are given below:

| Item | Cost per year |
|---|---|
| Board and lodging at $7 per week | $364.00 |
| Clothing: | |
| Footwear and repairs, 3 pairs $5, $4, $4; bedroom slippers, $1.25, rubbers or goloshes $3, repairs, $2 | 19.25 |
| Stockings | 10.00 |
| Underwear | 8.50 |
| Nightgowns | 4.00 |
| Costume slips and bloomers | 5.00 |
| Corsets and brassieres | 5.50 |
| Kimono (2 years) | 1.00 |
| Hats | 11.00 |
| Suit (half cost to wear 2 years) or skirt (1 year, $5) and light coat (2 years), $12.50 | 11.25 |
| Winter coat to wear 2 years | 8.25 |
| Winter dresses | 10.00 |
| Summer dresses, 2 or 3 | 12.00 |
| Shirt waists | 8.50 |
| Sweater (2 years) | 2.00 |
| Aprons | 2.50 |
| Handkerchiefs | 2.00 |
| Gloves | 4.00 |
| Scarf | 1.00 |
| Umbrella, to last 2 years | 1.25 |
| Total for clothing | 127.00 |
| Sundries: | |
| Laundry | 39.00 |
| Doctor, dentist, optician | 20.00 |
| Car fare | 39.00 |
| Reading matter | 6.00 |
| Postage and stationery | 5.00 |
| Recreation and amusement | 23.00 |
| Church and charity | 10.00 |
| Incidentals, including toothbrush, comb, soap, tooth paste, talcum powder, nail file, shoe polish, hand lotion, pins, needles, thread, whisk, shoe laces, etc. | 20.00 |
| Total for sundries | 162.00 |
| Total expenses for year | 653.00 |
| | Cost per week |
| Board and lodging | $7.00 |
| Clothing | 2.44 |
| Sundries | 3.06 |
| Total | 12.50 |

## Cost of Living of a Laborer's Family in Mexico

THE Mexican National Department of Statistics has compiled cost-of-living data showing the daily amount required to cover the necessaries of life of a Mexican family of four, a résumé of which

is contained in a report from the American consul general, William Dawson, at Mexico City dated May 23, 1929.

Table 1 gives the average cost of living per day of a laborer's family of four persons for the 6-year period from 1922 to 1927 in the Federal district (Mexico City and immediate vicinity) and for the entire Republic:

TABLE 1.—AVERAGE COST OF LIVING PER DAY OF A FAMILY OF FOUR IN THE FEDERAL DISTRICT AND IN THE ENTIRE REPUBLIC, 1922 TO 1927

| Year | Federal district | | Entire Republic | |
|---|---|---|---|---|
| | Pesos | United States currency | Pesos | United States currency |
| 1922 | 2.79 | $1.339 | 2.85 | $1.368 |
| 1923 | 3.80 | 1.824 | 3.65 | 1.752 |
| 1924 | 3.60 | 1.728 | 3.18 | 1.526 |
| 1925 | 3.10 | 1.488 | 3.14 | 1.507 |
| 1926 | 3.12 | 1.498 | 3.08 | 1.478 |
| 1927 | 3.31 | 1.589 | 3.03 | 1.454 |

The average cost of living per day for a laborer's family of four persons in the various Mexican States and Territiories in 1927 is given below:

TABLE 2.—AVERAGE COST OF LIVING PER DAY OF A FAMILY OF FOUR IN 1927 IN THE SPECIFIED MEXICAN STATES AND TERRITORIES

| State or Territory | Pesos | United States currency | State or Territory | Pesos | United States currency |
|---|---|---|---|---|---|
| Aguascalientes | 2.33 | $1.118 | Nuevo Leon | 2.63 | $1.262 |
| Campeche | 3.40 | 1.632 | Oaxaca | 3.13 | 1.502 |
| Chiapas | 2.55 | 1.224 | Puebla | 2.82 | 1.354 |
| Chihuahua | 2.82 | 1.354 | Queretaro | 2.72 | 1.306 |
| Coahuila | 2.73 | 1.310 | San Luis Potosi | 2.87 | 1.378 |
| Colima | 2.49 | 1.195 | Sinaloa | 2.88 | 1.382 |
| Durango | 2.42 | 1.162 | Sonora | 3.32 | 1.594 |
| Guanajuato | 2.46 | 1.181 | Tabasco | 2.99 | 1.435 |
| Guerrero | 2.90 | 1.392 | Tamaulipas | 3.17 | 1.522 |
| Hidalgo | 2.88 | 1.382 | Tlaxcala | 3.09 | 1.483 |
| Jalisco | 2.49 | 1.195 | Vera Cruz | 3.14 | 1.507 |
| Mexico | 2.71 | 1.301 | Yucatan | 3.99 | 1.915 |
| Michoacan | 2.67 | 1.282 | Zacatecas | 2.43 | 1.166 |
| Morelos | 2.79 | 1.339 | Lower California (north) | 4.97 | 2.386 |
| Nayarit | 2.56 | 1.229 | Lower California (south) | 4.19 | 2.011 |

## Cost of Living in Peru, 1913 to 1928

THE General Statistical Office of Peru [1] has recently published index numbers of the cost of living in that Republic from 1913 to 1928, which are given below:

INDEX NUMBERS OF COST OF LIVING IN PERU, 1913 TO 1928

| Year | Food | Rent | Clothing | Miscellaneous | Total cost of living | Year | Food | Rent | Clothing | Miscellaneous | Total cost of living |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1913 | 100 | 100 | 100 | 100 | 100 | 1921 | 183 | 220 | 291 | 159 | 199 |
| 1914 | 107 | 100 | 100 | 98 | 104 | 1922 | 174 | 220 | 259 | 155 | 190 |
| 1915 | 115 | 100 | 117 | 109 | 112 | 1923 | 166 | 220 | 248 | 129 | 180 |
| 1916 | 123 | 115 | 129 | 125 | 123 | 1924 | 168 | 242 | 248 | 141 | 187 |
| 1917 | 145 | 130 | 146 | 144 | 142 | 1925 | 179 | 266 | 250 | 159 | 200 |
| 1918 | 162 | 150 | 192 | 169 | 164 | 1926 | 182 | 266 | 238 | 164 | 201 |
| 1919 | 188 | 180 | 223 | 172 | 188 | 1927 | 177 | 244 | 235 | 161 | 194 |
| 1920 | 208 | 200 | 268 | 182 | 210 | 1928 | 161 | 219 | 228 | 173 | 181 |

[1] Peru. Ministerio de Hacienda. Boletin de la Dirección General de Estadística, Lima, June, 1929, p. 13.

# IMMIGRATION AND EMIGRATION

## Statistics of Immigration for July, 1929

By J. J. Kunna, Chief Statistician United States Bureau of Immigration

ALIENS admitted to the United States in the first month of the new fiscal year beginning July 1, 1929, totaled 35,817. This is 4,127 less than the average admitted during the preceding 12 months. There was, however, a large outward movement of passengers in July last, 28,170 aliens having left here during the month, or 7,129 above the monthly average number of alien departures for the fiscal year ended June 30, 1929.

Many Americans responded to the lure of strange countries during July, 1929, when the vacation exodus to Europe is at its height. The statistics show that 56,339 United States citizens left the country during this month. The women outnumbered the men among these departures, the females comprising 29,564 and the males 26,775, the vast majority of whom were destined to Europe via New York, 46,370, or 82.3 per cent of the total for the month, having embarked at that port. July, 1929, also saw the return of many tourists, 37,636 American citizens having arrived at all ports this month.

Deportations in July, 1929, show an increase over the corresponding month of either of the two previous years, 1,261 aliens having been deported under warrant proceedings during July, 1929, compared with 768 for July, 1928, and 700 for July, 1927.

Aliens debarred from entering the United States during July last numbered 847, but only 197 of these were rejected at the seaports of entry. The other 650 were refused admission at points along the land borders, 474 having been turned back to Canada and 176 to Mexico. At New York, our principal seaport and where the bulk of the immigration from overseas continues to land, 22,609 aliens sought admission during the month, of whom 108 were debarred, or less than 5 out of every thousand applicants; and many of these were stowaways and seamen seeking permanent admission to the United States without first having obtained visas from American consuls.

Of the 35,817 aliens of all classes admitted during July last under the immigration act of 1924, 22,501, or 62.8 per cent, entered at New York and 4,959 at the other seaports, 6,148 came in over the northern land border and 2,209 over the southern border. Less than one-third of the New York arrivals were charged to the quota, 7,136 of the aliens coming in that way being quota immigrants, while 5,835 were temporary visitors and persons passing through the country, 5,202 were returning residents, and 707 were admitted under the act as natives of nonquota countries. Husbands, wives, and unmarried children of American citizens numbered 3,168, and the miscellaneous

classes 453. The two principal classes of admissions under the act at points along the land borders included 5,654 natives of nonquota countries and 1,295 quota immigrants.

Canada, Germany, Italy, Mexico, Great Britain, and the Irish Free State, in the order named, were the principal countries from which the newcomers came during July, 1929, about three-fourths of the total immigrants admitted this month coming from these six countries. Nearly two-thirds of the permanent July departures were destined to Europe, 3,354 out of a total of 5,086 emigrant aliens for the month giving countries on that Continent as their future homes. Germany, Great Britain, and the Scandinavian countries were the principal destinations of these emigrants.

INWARD AND OUTWARD PASSENGER MOVEMENT FROM JULY 1, 1928, TO JUNE 30, AND JULY, 1929

| Period | Inward | | | | | Aliens debarred from entering [1] | Outward | | | | | Aliens deported after landing [2] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Aliens admitted | | | United States citizens arrived | Total | | Aliens departed | | | United States citizens departed | Total | |
| | Immigrant | Nonimmigrant | Total | | | | Emigrant | Nonemigrant | Total | | | |
| Fiscal year ended June 30, 1929 | 279,678 | 199,649 | 479,327 | 449,955 | 929,282 | 18,127 | 69,203 | 183,295 | 252,498 | 431,842 | 684,340 | 12,908 |
| July, 1929 | 20,068 | 15,749 | 35,817 | 37,636 | 73,453 | 847 | 5,086 | 23,084 | 28,170 | 56,339 | 84,509 | 1,261 |

[1] These aliens are not included among arrivals, as they were not permitted to enter the United States.
[2] These aliens are included among aliens departed, they having entered the United States, legally or illegally, and later being deported.

# PUBLICATIONS RELATING TO LABOR

## Official—United States

ILLINOIS.—Department of Mines and Minerals. *Forty-seventh coal report of Illinois, 1928. Springfield, 1929. 271 pp.*

Data on coal production, taken from this report, are published in this issue.

NEVADA.—Office of Labor Commissioner. *Biennial report, 1927–1928. Carson City, 1929. 21 pp.*

Data on wage claims from this report are published in this issue.

NEW JERSEY.—Department of Banking and Insurance. *Annual report, relative to savings banks, trust companies, and State banks of discount and deposit, private bankers, credit unions, provident loan associations, and small loan brokers, for the year ending December 31, 1928. Trenton, 1929. 169 pp.*

The credit-union section covers 8 such societies, with loans outstanding amounting to $36,374. The number of borrowers during the year was 1,346, and the largest loans made ranged, in the reporting societies, from $50 to $500.

PENNSYLVANIA.—Department of Labor and Industry. *Special bulletin No. 29: Hours and earnings of men and women in the silk industry. Harrisburg, 1929. 74 pp.*

Reviewed in this issue.

WEST VIRGINIA.—Bureau of Negro Welfare and Statistics. *Report, 1927–28: The West Virginia Negro. Charleston, [1929]. 74 pp.*

Reviewed in this issue.

UNITED STATES.—Department of Commerce. Bureau of Mines. *Technical paper No. 448: Coal-dust explosions in mines—causes, effects, and recommendations for prevention, by George S. Rice. Washington, 1929. 24 pp.*

Reviewed in this issue.

—— Department of Labor. Bureau of Labor Statistics. *Bulletin No. 494: Labor legislation of Uruguay. Washington, 1929. 70 pp.*

## Official—Foreign Countries

AUSTRALIA.—[Department of the Treasury.] Pensions and Maternity Allowance Office. *Invalid and old-age pensions. Statement for the year ended June 30, 1928. Canberra, 1928. 10 pp.*

On June 30, 1928, there were 139,367 old-age pensioners, a net increase of 6,133 during the year, and 55,517 invalidity pensioners, a net increase of 3,118. The total number of old-age pensioners admitted during the year was 18,432, of whom 9,151 were men and 9,281 women. Their ages at the time of receiving the pensions ranged from 60 to 96, the largest group, 2,931, coming in at 60, the next largest, 2,511, at 65, and 79 per cent being in the age group 60 to 69. Old-age pensioners numbered 224, and invalidity pensioners 89 for each 10,000 of the population. The average fortnightly pension at the close of the year was 38s. 5d [$9.35], the total amount paid in old-age and invalidity pensions during the year was £9,681,837 [$47,150,546], and the cost of administration was £118,641 [$577,782].

AUSTRALIA.—[Department of the Treasury.] Royal Commission on Child Endowment or Family Allowances. *Report. Canberra, 1929. 125 pp.*

A summary of the findings and recommendations of this commission is published in this issue.

—— (NEW SOUTH WALES).—Registry of Friendly Societies. *Friendly societies and trade-unions. Report for the 12 months ended June 30, 1928. Sydney, 1929. 24 pp.*

During the year the membership of the friendly societies increased from 238,527 to 242,199, or by 1.54 per cent. Receipts exceeded expenditures by £172,319 [$839,194], and the funds on hand at the close of the year amounted to £3,591,118 [$17,488,745]. The amount paid out in benefits was £712,597 [$3,470,347], or an average amount per adult member of £3 5s. 1d. [$15.84]. Of the total benefits paid, 43 per cent was for sickness, 46 per cent went for medical attendance and medicine, and 11 per cent for funeral donations. The expenses of management amounted to £156,444 [$761,882], or 14.6 per cent of the total income.

—— (VICTORIA).—Government Statist. *Fifty-first annual report on friendly societies, for the 12 months ending June 30, 1928. Melbourne, 1929. xix, 36 pp.*

In addition to the usual statistical data, the report contains valuations of the societies, and numerical and financial summaries of the returns furnished by their secretaries.

BELGIUM.—Ministère de l'Industrie, du Travail et de la Prévoyance Sociale. *Rapports annuels de l'inspection du travail, 1927. Brussels, 1928. 307 pp.; diagrams, illus.*

The report of the Belgian labor inspection service for 1927. It covers industrial accidents, hours of labor, work of women and children, and general working conditions in the different sections of the country.

—— —— Direction Générale de l'Assurance et de la Prévoyance Sociales. *Rapport sur la réparation des dommages résultant des accidents du travail, 1924, 1925, 1926. Wetteren, 1928. 208 pp.*

Report of the general insurance and social welfare office in Belgium on the operation of the workmen's compensation funds during the three-year period 1924–1926.

CANADA.—Department of Trade and Commerce. Bureau of Statistics. *The Canada year book, 1929. Ottawa, 1929. 1,070 pp.; map, charts.*

Among the special features in this volume are a study of occupations based on the 1921 Canadian Census, a general survey of production in 1926, summary figures of the Census of Manufactures for 1927, and statistics on the operation of the old-age pension system. One chapter deals with labor and wages and another with prices.

—— —— —— *The textile industries of Canada in the decade 1917–1926. Ottawa, 1929. 145 pp; charts.*

In 1926, out of 22,708 establishments in Canada reporting in the census of industry, 1,685, or 7.5 per cent, were in the textile group, and 100,434 workers, or 17.3 per cent of all the industrial employees in the Dominion, were working in the textile industry.

—— (ONTARIO).—Minimum Wage Board. *Eighth annual report, 1928. Toronto. 1929. 38 pp.*

The cost-of-living budget for an independent working woman in Toronto, contained in this report, is given in this issue.

CHINA (GREATER SHANGHAI).—Bureau of Social Affairs. *Annual report on labor strikes in Greater Shanghai, 1928. Greater Shanghai [1929?]. [Various paging.]*

Some statistics from this report are published in this issue.

CHINA (GREATER SHANGHAI).—Bureau of Social Affairs. *Report on industrial disputes in Greater Shanghai, July–December, 1928. Greater Shanghai [1929?].* [*Various paging.*]

An analysis of industrial controversies for the period under review, according to the principles adopted by the International Labor Office.

FEDERATED MALAY STATES.—Labor Department. *Annual report for the year 1928. Kuala Lumpur, 1929. 53 pp.*

Includes statistics on Indian immigration, labor conditions, wages, and number of laborers of different nationalities employed on estates.

GERMANY (BREMEN).—Statistisches Landesamt. *Berufs- und Betriebszählung vom 16. Juni 1925 im Freistaat Bremen. 1. Heft: Landwirtschaftliche Betriebszählung. 2. Heft: Gewerbliche Betriebszählung. 3. Heft: Volks- und Berufszählung. Bremen, 1928 and 1929.* [*Various paging.*]

These three volumes contain the results of an industrial and occupational census in the Free State of Bremen, Germany, in 1925.

—— (PRUSSIA).—Statistisches Landesamt. *Statistisches Jahrbuch für den Freistaat Preussen. 25 Band. Berlin, 1929. 403 pp.*

This yearbook contains statistical information in regard to social and economic conditions in Prussia, including chapters on labor conditions, social insurance, public health, welfare work, etc.

GREAT BRITAIN.—Economic Mission to Australia. *Report, January 7, 1929. London, 1929. 63 pp.*

Reviewed in this issue.

—— Home Office. *Factory and workshop orders, 1929 edition. London, 1929. 351 pp.*

The matters covered include conditions of employment, dangerous and unhealthy industries, welfare, home work, etc.

—— —— Factory Department. *Annual report for the year 1928. London, 1929. 149 pp. (Cmd. 3360.)*

Gives a general report dealing with safety, dangerous trades, the lead-paint act, sanitation, employment, welfare, truck acts, and works committees, and special chapters containing reports of the medical, electrical, and engineering inspectors, a discussion of the Home Office industrial museum, and a historical account of the English cutlery trade.

—— Industrial Fatigue Research Board. *Report No. 56: The effects of monotony in work. A preliminary inquiry, by S. Wyatt and J. A. Fraser, assisted by F. G. L. Stock. London, 1929. 47 pp.*

Reviewed in this issue.

—— Industrial Health Research Board. *Ninth annual report, to December 31, 1928. London, 1929. 33 pp.*

This report gives a brief statement of the studies carried out by the board (formerly the Industrial Fatigue Research Board) during 1928. These included investigation of various problems of general industrial importance, such as hours of work, ventilation and lighting, accident causation, vocational guidance and selection, etc.; the study of certain specific problems submitted by government departments and industrial associations, including the sickness incidence in different industries, causes of absenteeism among miners, and load carrying by men; and various laboratory researches.

—— Ministry of Health. *Tenth annual report, 1928–29. London, 1929. 238 pp. (Cmd. 3362.)*

Data on housing and pensions of various kinds, taken from this report, are given in this issue.

—— Ministry of Labor. *Report for the year 1928. London, 1929. 139 pp., illus. (Cmd. 3333.)*

Data from this report, relating to training schemes, are given in this issue.

GREAT BRITAIN.—Registry of Friendly Societies. *Report for the year 1928. Part I: General. London, 1929. 28 pp.*

—— —— *Report for the year 1928. Part 4: Trade unions. Section II: Directory and summaries. London, 1929. 33 pp.*

INDIA (BOMBAY).—Labor Office. *Report on an inquiry into family budgets of cotton-mill workers in Sholapur City. Bombay, 1928. 73 pp., illus.*

—— —— *Report on an inquiry into working class family budgets in Ahmedabad. Bombay, 1928. 48 pp., charts, illus.*

INTERNATIONAL LABOR OFFICE.—*The minimum requirement of professional capacity in the case of captains, navigating and engineer officers in charge of watches on board merchant ships. (Fourth item on agenda of International Labor Conference, 13th session, Geneva, 1929, first discussion.) Geneva, 1929. 107 pp.*

—— *The protection of seamen in case of sickness, including the treatment of seamen injured on board ship. I. The individual liability of the shipowner towards sick or injured seamen. II. Sickness insurance for seamen. (Second item on agenda of International Labor Conference, 13th session, Geneva, 1929, first discussion.) Geneva, 1929. 240 pp.*

IRISH FREE STATE.—Department of Industry and Commerce. *Factory and workshop acts, 1901–1920. Report for 1927. Dublin, 1929. 16 pp.*

Gives data relating to the administration of the factory and workshop acts, including inspections, prosecutions, accidents, etc.

JAPAN.—Cabinet Impérial. Bureau de la Statistique générale. *Résumé statistique de l'Empire du Japon, 43e année. Tokyo, 1929. 155 pp., charts.*

One section of this volume is devoted to labor subjects—unemployment, placement, industrial controversies, wages, bonuses, etc.

—— (TOKYO).—Municipal Office. Statistical Bureau. *Twenty-fifth annual statistics of the city of Tokyo. Tokyo, 1929. 1,729 pp.*

Includes statistics on wholesale and retail prices and wages, the latest date for such statistics being 1927.

NEW ZEALAND.—National Provident Fund. *Eighteenth annual report, for the year ended December 31, 1928. Wellington, 1929. 4 pp.*

Some figures from this report are given in this issue.

SWITZERLAND.—Bureau Fédéral de Statistique. *Annuaire statistique de la Suisse, 1928. Bern, July, 1929. 362 pp. (In German and French.)*

This yearbook gives statistical information in regard to the socio-economic conditions prevailing in Switzerland, including data on wages, unemployment, labor unions, etc.

—— Département Fédéral de l'Économie publique. *Rapports des gouvernements cantonaux et du gouvernement de la principauté de Liechtenstein concernant l'exécution de la loi fédérale sur le travail dans les fabriques, 1927 et 1928. Aarau, 1929. 194 pp.*

The volume contains reports on the enforcement of the Federal labor laws in the factories of various cantons in Switzerland, such as those on factory hygiene, order, hours of labor, women's labor, labor of minors, etc.

## Unofficial

AMERICAN IRON AND STEEL INSTITUTE. *Annual statistical report, 1928. New York, 75 West Street, 1929. 119 pp.*

Presents data on production in the iron and steel and allied industries, imports and exports, and prices, for the United States, with certain figures for foreign countries.

BOTHA, J. H. *Die Arbeidsvraagstuk van Suid-Afrika. Amsterdam, H. J. Paris, 1928. 253 pp.*

This volume contains a review of the economic position of South Africa and a description of the past and present labor conditions there, such as wages, geographic division of wage earners, unemployment, etc.

BRADWAY, JOHN S. *Law and social work—an introduction to the study of the legal-social field for social workers. Chicago, University of Chicago Press, 1929. 189 pp. (Social service monographs, No. 6.)*

The purpose of this book is "to give, in an elementary manner, some idea of certain general rules of law which the experience of legal aid societies tell us are likely to affect treatment of the difficulties that befall the type of person who seeks relief from social agencies." Among the rules of law so covered are those affecting labor contracts, wages, small loans, wage assignments and garnishments, and workmen's compensation.

BROWN, W. HENRY. *A century of London cooperation. London, Education Committee of the London Cooperative Society (Ltd.), 1928. 179 pp., illus.*

Reviewed in this issue.

CARNEGIE ENDOWMENT FOR INTERNATIONAL PEACE. *The cooperative movement in Russia during the war. Consumers' Cooperation, by Eugene M. Kayden. Credit and Agricultural Cooperation, by Alexis N. Antsiferov. New Haven, Yale University Press, 1929. 420 pp. (Economic and social history of the World War, Russian series.)*

A detailed and painstaking analysis of the cooperative movement in Russia: showing the economic and social background which influenced, either favorably or unfavorably, the growth of the movement. This study covers only the period up to and through the World War and the Russian revolution. The situation under the Soviet régime is not covered.

—— *The effect of the World War upon the commerce and industry of Japan. Commerce, by Kakujiro Yamasaki. Industry, by Gotaro Ogawa. New Haven, Yale University Press, 1929. 345 pp., charts. (Economic and social history of the World War, Japanese series.)*

The following are among the conclusions reached as a result of this study, That the most outstanding facts in Japan's war-time industry were the doubling between 1913 and 1918 of the total horsepower used in industry, together with the increase of 50 per cent in the number of factory workers; and that in the postwar period the conditions of trade and commerce improved as compared with conditions in the war years.

CARROLL, MOLLY RAY. *Unemployment insurance in Germany. Washington, Brookings Institution, 1929. 137 pp.*

A review of the unemployment insurance experiences in Germany up to date. A translation of German orders and acts dealing with unemployment is added to the volume.

CONSUMERS' LEAGUE OF MASSACHUSETTS. *Some types of industrial poisoning. Boston, 3 Joy Street, 1929. 44 pp.*

This pamphlet contains an account of hazards to which women particularly were exposed in 55 plants manufacturing shoes, leather, rubber, candy, etc., in the vicinity of Boston. The study showed in some cases almost complete disregard for the safety of the workers and often a lack of knowledge on the part of the employers of the dangerous character of the substances used.

DAVIS, JEROME, Editor. *Labor speaks for itself on religion: A symposium of labor leaders throughout the world. New York, Macmillan Co., 1929. 265 pp.*

ELSOM, JAMES CLAUDE. *Community recreation. New York, Century Co., 1929. 278 pp., illus.*

A practical volume for recreation workers, containing a wide variety of suggestions for various types of social gatherings, detailed descriptions of games, and hints regarding organization and methods. There is also some discussion of the philosophy of recreation and of the history of the recreation movement.

HALL, F. *Handbook for members of cooperative committees. Manchester (England), The Cooperative Union, (Ltd.) 1928. 460 pp.*

Since the cooperative movement is ruled by committees, and these are often composed of men and women with no previous business experience, the present work is designed for the assistance of persons serving on such committees. A good deal of the legal side applies to Great Britain alone, but American cooperators should find of value the chapters on cooperative capital, the administration of the society, the committees' administrative work, trading policy, cooperative finance, etc.

HARTLEY, LAWRENCE A. *Human engineering and industrial economy. [Chicago?], 1928. 344 pp., illus. [Privately printed.]*

HAYWOOD, WILLIAM D. *Bill Haywood's book. New York, International Publishers, 1929. 368 pp.*

HOLLAND, MAURICE. *The industrial transition in Japan. New York, National Research Council, 1927. 51 pp., map.*

The author reports an enrollment of 30,000 engineers as members of Japan's national engineering societies and ranks Japan in the organization of industrial research as fourth among the world's industrial nations.

HOUGH, PAUL V., Editor. *Opinions of importance—a compilation of opinions from individuals, organizations, and publications of authority, on the necessity of the uniform small loan law. Harrisburg, Pa., American Industrial Lenders Association, 1929. 364 pp.*

INSTITUT INTERNATIONAL DE STATISTIQUE. L'Office permanent. *Aperçu de la démographie des divers pays du monde. La Haye, 1929. 447 pp.*

Contains statistical information in regard to population and its movement in various countries.

INSTITUTE INTERNATIONAL DE COOPERATION INTELLECTUELLE. *Comptes rendus de la IV^me^ Conférence Internationale de Psychotechnique. Paris, 1929. 686 pp.*

The papers in the International Psychotechnical Conference covered the questions of methods, psychological tests, study of human labor, problems of scientific management, occupational guidance and placement, mental hygiene, and the organization of industrial psychology in different countries.

DE MAN, HENRI. *Joy in work. Translated from the German by Eden and Cedar Paul. London, George Allen & Unwin (Ltd.), 1929. 224 pp.*

The first part of this book deals with the motives which cause joy in the work, and the second part those which act as hindrances to such enjoyment. Among the latter the author includes detailed work, repetitive work, fatigue, unfavorable technical conditions, the social conditions of labor, unjust wage systems, and the "disciplinary subordination of the worker."

MICHLIGK, PAUL. *Dienen und Verdienen. Deutsche Experimente, americanische Erfolge. Zweite Auflage. Stuttgart, Verlag für Wirtschaft und Verkehr, 1927. 323 pp.*

MOLITOR, ERICH, and others. *Europäisches Arbeitsvertragsrecht. Marburg in Hessen, N. G. Elwert'sche Verlagsbuchhandlung, G. Braun, 1928, 1929. 2 vols. 160 and 618 pp.*

Contains laws relating to trade agreements in the following countries: Part I—Belgium, France, Greece, Italy, Luxemburg, Portugal, and Spain; Part II—Albania, Bulgaria, Czechoslovakia, Danzig, Estonia, Latvia, Finland, Lithuania, Memel, Poland, Rumania, Soviet Union (U. S. S. R.), Yugoslavia, and Hungary.

MORRIS, M. C. F. *The British workman, past and present. London, Oxford University Press, 1928. 166 pp.*

A "human interest" story of the life and conditions of work of agricultural laborers in Yorkshire some 70 or 80 years ago, centering around the life of a particular workman who is taken as a type.

MYERS, CHARLES S., EDITOR. *Industrial psychology. London, Thornton Butterworth (Ltd.), 1929. 252 pp.*

A collection, for the most part, of papers contributed by the investigating staff of the National Institute of Industrial Psychology, with an introduction by the director of that organization. The purpose of industrial psychology, according to this introduction, "is to discover the best possible human conditions in occupational work."

NANKAI UNIVERSITY. Committee on Social and Economic Research. *Price series, Bulletin No. 1: Wholesale prices and price index numbers in North China, 1913 to 1929. Tientsin, China Press (Ltd.), 1929. 145 pp.; chart.*

The base year used in the construction of these index numbers is 1926.

NATIONAL ASSOCIATION OF LEGAL AID ORGANIZATIONS. *Reports of committees, 1928–29, for discussion at the convenion in Cincinnati, October 3 and 4, 1929. Philadelphia, 1929. 110 pp.*

The secretary's report, given in this volume, shows that during 1928, the legal-aid organizations and public or voluntary defenders handled 167,020 cases and collected $645,438, at a gross cost of $473,673.

NATIONAL CONFERENCE ON CITY PLANNING. *Planning problems of town, city, and region. Philadelphia, Wm. Fell Co., 1928. 246 pp., chart.*

Papers and discussions at the twentieth national conference, held at Dallas and Fort Worth, Tex., May 7 to 10, 1928.

NATIONAL LEAGUE OF WOMEN VOTERS. *Explanation of the program of the committee on women in industry, National League of Women Voters, 1928–29. Washington, 1929. 18 pp.*

Gives the program of study recommended by the committee, with the reasons for adopting each item, and references to the leading discussions of the subject.

NEFF, WANDA FRAIKEN. *Victorian working women—an historical and literary study of women in British industries and professions, 1832–1850. London, George Allen & Unwin (Ltd.), 1929. 288 pp.*

An attempt to picture the condition of the working woman in England between 1832 and 1850, and to study the literary treatment accorded her, with a view to discovering the function of literature in handling social questions.

REVUE DE LA SCIENCE DU TRAVAIL. *Tome I, No. 1, March, 1929. Paris, 108 Boulevard Saint-Germain. 179 pp.*

This is the first issue of a quarterly journal entitled "Review of the Science of Labor" which will be published in Paris. The publication is to be devoted to the study of problems connected with the scientific organization of labor and will contain original articles, a general review of some subject of current interest, notes and documents concerning the general movement in the field of applied psychology and scientific organization of labor, and a critical review of books and articles on these subjects.

SELEKMAN, BEN M., AND SYLVIA K. *British industry to-day. New York and London, Harper & Bros., 1929. 290 pp.*

A study of the trends in industrial relationships in England to-day, with special emphasis on the various plans for cooperative efforts, such as shop committees, the Whitley committees, and the Mond-Turner Conference.

SOVIET UNION YEARBOOK, 1929. *Compiled and edited by A. A. Santalov and Louis Segal. London, George Allen & Unwin (Ltd.), [1929?]. 624 pp.*

Contains information in regard to social and economic conditions, including those relating to labor, in the Soviet Union (U. S. S. R.).

SPEEK, PETER A. *Palga teooriad ja -tendentsid Ühisriikides. Tartu (Estonia), Kirjastuse Ühisus "Postimees", 1929. 24 pp.*

The booklet contains a review of the wage theories and tendencies in the United States, with closer attention to the productivity wage theory and determination as proposed by the American Federation of Labor.

TEAD, ORDWAY. *Human nature and management. New York, McGraw-Hill Book Co. (Inc.), 1929. 312 pp.*

The purpose of the volume is to present findings of modern psychology and demonstrate their applicability to managerial problems.

TRUXAL, ANDREW G. *Outdoor recreation legislation and its effectiveness. New York, Columbia University Press, 1929. 218 pp. (Columbia University studies in history, economics, and public law, No. 311.)*

This volume contains a summary of American legislation enacted during the years 1915 to 1927 which makes provision for public outdoor recreation, and a study of the question of the possible association of the occurrence of recreational areas with the incidence of juvenile delinquency. The study seemed to show that the provision of play spaces did, to a certain extent, have a favorable influence in reducing delinquency among minors.

VANCE, RUPERT B. *Human factors in cotton culture: A study in the social geography of the American South. Chapel Hill, University of North Carolina Press, 1929. 346 pp., maps.*

The preface to the book states that "this volume is planned as a part of a series of studies in the regional South undertaken by the Institute for Research in Social Science at the University of North Carolina. Taking for their general subject the southern regional field, they attempt to set forth the culture peculiar to the American South in terms of its conditioning by natural environments. The writer, as his part of the task, hopes to complete within the next three years a human geography of the South."

VERBAND DER MALER, LACKIERER, ANSTREICHER, TÜNCHER UND WEISSBINDER DEUTSCHLANDS. *Jahrbuch, 1928. Hamburg, 1929. 121 pp.*

This yearbook contains information in regard to the conditions of the painting and other related trades in Germany, wages, hours, and other labor conditions of the painters, their unions, insurance, unemployment, etc.

WICKSTEED, ALEXANDER. *Life under the Soviets. London, John Lane, The Bodley Head (Ltd.), 1928. 196 pp.*

Gives the results of the personal experience of the author, an Englishman who has resided in Moscow for the past five years. The subjects include housing conditions, the cooperative stores, amusements, and education.